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INTERNATIONAL LABOUR REVIEW

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Population and Social Problems

A new conception of social policy has arisen in recent years, largely owing to the extent of unemployment. Over and above the mere protection of the workers against social risks and abuses, which from the economic point of view appeared to have a restrictive effect, social policy is now more and more regarded as a constructive effort to provide the workers with the opportunity to attain a decent standard of living. This development has caused economic problems to be considered from a new point of view, and at the same time has brought within the purview of social policy questions which might formerly have appeared beyond its scope. One of these questions is that of population. The international importance of this question was brought out in 1937 by a resolution of the Assembly of the League of Nations requesting the Council to take the necessary steps to draw up a programme of enquiries to be undertaken by the Economic and Financial Organisation of the League in close collaboration with the International Labour Office. Last September, on the proposal of the Economic Committee following a preliminary survey of the question, the Assembly requested the Council "to constitute a Sub-Committee of Experts to study demographic problems and especially their connection with the economic, financial and social situation". This Sub-Committee was set up by the Council at its January Session.

As a general enquiry into demographic problems in all their aspects is thus about to be undertaken, the moment seemed opportune to present to readers of the Review *a statement of these problems from the point of view of national and international social policy.*

INTRODUCTION

SINCE its beginnings in the first years of the XIXth century in the countries of growing industrialisation, social policy has developed in a remarkable manner. Born in an age completely dominated by the principles of the Manchester school, it was

obliged, slowly and with difficulty, to clear for itself a narrow path between the obstacles placed in its way by economic liberalism. Its first efforts were directed towards regulating the employment of children and protecting workers against industrial accidents. As the XIXth century approached its end, however, the path of social policy became wider and less arduous.

At the beginning of the XXth century, social measures already constituted a considerable section of the general body of legislation in the more advanced industrial countries. Regulations were gradually extended to cover adult workers; employment exchanges and methods of dealing with unemployment were organised; social insurance developed; and the workers were helped to defend their rights by the creation of special tribunals and by fuller guarantees of freedom of association.

After 1918, the movement spread and developed more rapidly. Before the war, social policy was restricted to a limited number of very highly industrialised countries, and its efforts in these countries were largely confined to the industrial field. After the war, international social consciousness, which found its expression in the establishment and the working of the International Labour Organisation, stimulated every country to enact labour legislation, which has been supplemented from year to year and extended gradually to cover every category of workers.

At the same time, a wider conception of social policy came into being. It became increasingly evident that if the world wished to achieve the aim laid down in the Preamble to the Constitution of the International Labour Organisation, and eliminate "injustice, hardship and privation" such as was suffered by "large numbers of people", and prevent the unrest resulting from these conditions from endangering the peace and harmony of the world—in short, to establish "social justice" as the basis of "universal peace"—it was necessary to aim at something more than merely improving working conditions. The economic depression showed how precarious was the progress made so long as the worker was liable to lose his possibility of employment from one day to the next. Unemployment became one of the main anxieties of every Government, and led the Governments to take a new view of economic problems. Social policy came to take fuller account of these problems, and economic policy began to be directed towards social progress. From

that time onward, social policy, while still seeking solutions for the problems falling within its proper sphere, has exerted an influence on economic policy, guiding it along lines which will permit, facilitate, or consolidate, social progress. In 1936 it could be said that "the severe economic depression of the last few years will have had among its many revolutionary consequences that of finally breaking down the barrier which certain opinionated persons had set up and wished to maintain between economic and social affairs". [1]

The purpose of economic policy, as of social policy, has become the improvement of the conditions of existence of the population. This trend was revealed in connection with the enquiries into nutrition, rural hygiene, and the standard of living, undertaken at the request of the Assembly of the League of Nations, and in the co-operation for the purpose of those enquiries between the Economic Organisation of the League and the International Labour Office, for which provision was made in the resolutions of the Assembly. "As a result of this new approach to social question", wrote the Director of the International Labour Office in his Report for 1935 [2], "social and economic policy are now seen as complementary aspects of a single problem."

The widening of the scope of social policy which thus took place leaves the international aspect of the problem exactly as it was defined in the Preamble to the Constitution of the International Labour Organisation. If a country concentrating its efforts on raising the standard of living of its population allows the divergences between its own standard of life and that of competing countries to become excessive, the reaction of this situation on international competition is likely to compromise the success of that country's efforts. Indeed, excessive differences between standards of living produce discontent among the less-favoured peoples, and therein lie the germs of conflicts which, even if they do not lead to actual war, induce the other countries to abandon their efforts to improve social conditions in favour of concentration on defence and national safety. Co-operation in the efforts of the poorer countries to improve their standards of living is therefore one of the conditions for the success of the wealthier countries in their efforts

[1] INTERNATIONAL LABOUR OFFICE: *L'Organisation internationale du Travail. Ce qu'elle est, ce qu'elle a fait.* Geneva, 1936.

[2] P. 79.

to maintain their own standards. Such co-operation can also pave the way for further progress in the latter countries because of the increased possibilities of trade with the countries whose purchasing power is raised.

But this extension of the field of social policy brought within its bounds problems which had previously been studied in a different context. Many questions which until quite recently were considered purely economic, often in contradistinction to social problems, are now studied from the point of view of continuity of employment, the maintenance of social services, and the stabilisation or improvement of conditions of life and labour. A policy which tends to guide economic life along lines that will produce social progress in the national sphere, and in the international sphere co-operation in a parallel raising of the standard of living in every country, must necessarily take account of the factors governing the economic life of each country. One of the most important of these factors is obviously population. The methods adopted by any country to raise its standard of living will naturally differ according to whether the demographic situation is favourable or unfavourable to such an improvement, and the country in question cannot ignore the indirect effects which the methods it adopts will have on the composition and movement of its population; for, if these indirect effects were likely to make the demographic situation develop in a direction unfavourable to an improvement in the standard of living, its efforts to achieve that improvement would eventually be nullified.

Similarly, any international action for the uniform raising of living conditions in a group of countries must, in deciding upon the means to be employed, take account of the trend of the demographic situation in the countries concerned and the influence which the proposed methods might have on this trend.

Movement of Population in the World as a Whole

The most striking feature of the movement of population in the world taken as a whole is the great difference between the trends in different areas or countries. This difference is much more marked to-day than it was in the last century.

In the early XIXth century, Malthus explained that the poverty of the working class was due mainly to what he considered a natural law of universal over-population. He based this law on the alleged impossibility of increasing the output

of foodstuffs at a rate corresponding to the increase in population, and on the fact that living standards must inevitably fall as a result of this situation. The years that followed showed that the course of events predicted by Malthus was by no means inevitable. In reality the increase in the population of the world, which would seem to have been extremely slow before 1650, but which began to become more rapid after that date, continued to gather speed during the whole of the XIXth century. According to the soundest estimates and the official census data, the earliest of which date from 1790, this increase may be indicated by the following figures [1] :

Year	Population in millions	Increase per thousand inhabitants from one date to the next
1650	465	—
1750	660	351
1800	840 [1]	474
1850	1,098	549
1900	1,551 [2]	693

[1] According to Hermann WAGNER, the figure was already 1,000 million at that date, but it was estimated by Aloys FISCHER at 755 million and by Professor CAUDEL at 660 million.
[2] Gustave SUNDBERG (*Aperçus statistiques internationaux*, 11th year, Stockholm, 1908, p. 3) gives the figure as 1,648 million.

In the course of a century, therefore, from 1800 to 1900, the population of the world practically doubled, and the rate of increase rose progressively. After 1900, the figure mounted to 2,025 million in 1930 [2] and 2,134 million in 1937 [3]. The move-

[1] Walter F. WILLCOX : " Increase in the Population of the Earth and of the Continents since 1650 ", in *International Migrations*, Vol. II, p. 78. New York, National Bureau of Economic Research, 1931.
It should, however, be noted that for certain extensive quarters of the globe (China, the Near East, Central Africa, etc.), inhabited by about a third of the population, only estimates are so far available. In any case the early censuses are liable to serious sources of error, which have gradually been eliminated, so that the early figures are always subject to considerable reservations. On this point, cf. P. F. MOMBERT : " Uber die geringe Zuverlässigkeit älterer Volkszählungen ", in *Jahrbücher für Nationalökonomie und Statistik*, Nov. 1933, pp. 745-751 ; A. M. CARR-SAUNDERS : *World Population* (Oxford, 1936), pp. 17 foll. ; and R. R. KUCZYNSKI : *Population Movements* (Oxford, 1936).
[2] *Statistical Year-Book of the League of Nations, 1930-1931*, p. 22. The *Aperçu de la démographie des divers pays du Monde*, The Hague, 1931, published by the International Institute of Statistics, gives 2,000 million.
[3] LEAGUE OF NATIONS : *Monthly Bulletin of Statistics*, Nov. 1938.

ment began in Europe, and spread more or less rapidly to other countries of the world.

Although the old continent of Europe suffered a net loss of about 40 million emigrants to other continents between 1800 and 1930 [1], its population, which was estimated at 187 million in 1800, rose to 401 million in 1900, 448 million in 1910, and 478 million in 1929 [2]. The annual rate of increase of the whole population of Europe remained high, and even rose progressively up to the time of the war of 1914-1918, being 6.4 per thousand inhabitants during the period 1860-1870 [3] and 10.5 during the period 1900-1910 [4].

The movement of population in Asia cannot be described with the same accuracy as in the case of Europe, except for certain districts and for relatively recent periods. It is thought, however, that the population must have increased almost fourfold from 1650 to 1930, rising from 250 to 954 million [5], and always forming about half of the world total. For the areas and recent periods for which exact data are available, it will be found that the curve of increase rises steeply, although not so rapidly as is generally supposed.

The population of Japan proper rose, after a long period of stagnation, from 31.1 million in 1870 to 64.5 million in 1930. It thus doubled in 60 years, and the rate of annual increase rose from 12 per thousand for the period 1873-1898 to 15 per thousand for 1925-1930. The total population of the Japanese Empire during the same period rose from 50 million to about 100 million. The only country to have reached a higher rate of increase would seem to be the Netherlands Indies, the population of which has increased almost tenfold since 1800, rising

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[1] Estimate of Imre FERENCZI, based on the national statistics quoted in his work *International Migrations*, Vol. 1 : *Statistics* (New York, National Bureau of Economic Research, 1929).

[2] The *Statistical Year-Book of the League of Nations* gives the figure of 510 million for 31 December 1931 ; the divergence is mainly due to a different allocation of the population of the U.S.S.R. to Europe and Asia.

[3] According to Gustave SUNDBERG ; *op. cit.*

[4] According to the *Aperçu de la démographie des divers pays du Monde*, 1931.

[5] According to WILLCOX ; according to CARR-SAUNDERS, the figure rose from 330 million to 1,121 million (1933). The discrepancy is due mainly to the estimates for China. According to CARR-SAUNDERS (*op. cit.*, pp. 41-42), the population of China had already reached 150 million in 1650, while according to WILLCOX it was only 70 million ; for 1930, WILLCOX estimates the population at 342 million, while CARR-SAUNDERS shares the widespread view that the population at that time was 450 million. It is thought to have been stationary at 430 million from 1850 to 1900, and then to have risen to the above-mentioned figure.

from about 7 million to 65 million. In Java alone it increased from about 3 million to 40 million.

In India there was no census before 1872. The population at that date was 206 million, and, according to the official corrected figures, it increased by 87.6 million up to 1930-31, the rate of annual increase per thousand inhabitants rising from 1.47 in 1872-81 to 10.11 in 1921-31.

For China the only available figures are estimates, which are too vague to enable the demographic curve to be calculated. According to official information, the rate of increase of the population has been very low since 1850, and some experts go so far as to say that the population remained stationary after that date, after having increased slowly during the two preceding centuries. In speaking of the populations of the Asiatic countries, and especially of China, it must be borne in mind that the rate of increase may well differ very greatly from one district to another.

Africa differs from Europe and Asia in that its population probably fell from about 100 million in 1650 to about 90 million in 1800 .[1] Since that date, however, it has risen again to about 150 million in 1930, the increase being due largely to the abolition of slavery and slave trading and the improvement in the health and economic conditions of the population.

America is the continent which has shown the greatest increase in population since 1800, this being attributable mainly to European immigration and the high birth rate among the early generations of immigrants. The population was probably about 13 million towards 1650 and 24 million in 1800, rising to 240 million about 1930— a tenfold increase in 130 years.

In North America the population rose from some 7 million in 1650 to 162 million in 1929 ; in South America from 6 to 77 million. In the United States the period of rapid growth began in the middle of the XVIIIth century. During the last forty years of that century the population doubled ; it doubled again between 1800 and 1840, and tripled between 1840 and 1900. Since that date the rate of increase has been reduced by half. In South America the period of rapid increase began later. Willcox calculates that the population more than doubled between 1800 and 1850 and more than quadrupled between 1850 and 1929.

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[1] According to CARR-SAUNDERS ; *op. cit.*, p. 34.

There has thus been a very large increase in the population of every continent since the beginning of the XIXth century; this increase sometimes took place at a dizzy speed, and the movement as a whole has not yet stopped. It is estimated that the total population of the world, leaving China out of account, increased by 11 per thousand in 1930.

The fact that the calculations of Malthus were so completely falsified by the facts may be attributed to his failure to realise how much the development of industrial production and world trade would simplify the problem of food supplies in the more advanced countries. The mechanisation of transport and agriculture made it possible to obtain products from very distant countries in exchange for goods produced by an extension of other branches of economic activity, such as mines, industry, etc. Technical progress also made it possible to increase production in countries which had a wealth of food supplies and raw materials without an inevitable accompanying increase in population such as Malthus had feared; instead, it was the standard of living which rose. The increased rapidity and reliability of communications also facilitated the direct readjustment of population by means of migration between countries with complementary demographic trends. Thanks to the application of science, and more especially chemistry, to agriculture, the national production of foodstuffs ceased to be the decisive factor it had formerly been in determining the standard of living and therefore also the mortality, marriage and birth rates. As a result of all this progress, production increased sixfold from 1850 to 1910, while the population of the world was merely doubled in the course of a century. It is true that this dual movement did not by any means follow the same course everywhere. Production increased rapidly in the countries in which intensive industrialisation was taking place, but its progress was much slower in those in which, for various reasons, agriculture continued to be the dominant factor. Demographic pressure continued to exert its influence on the standard of living of those countries, but freedom of migration offered a means of relieving this pressure by permitting the surplus population to find an outlet in oversea countries which at that time seemed to offer inexhaustible opportunities for immigrants. As a result of this situation, the habit quickly grew of ignoring, both in theory and in practice, the demographic problem. The increase in population was taken to be a natural and constant

phenomenon which was at the same time the cause and the effect of the increase in production, but which need not give grounds for any serious or widespread apprehension because the rate of increase of production was, on the whole, more rapid. Moreover, the traditional degree of fertility remained practically the same in most countries up to 1875, and indeed did not change much until 1900.

The XXth century, however, brought with it signs of new trends which threatened to overthrow the relative parallelism of demographic movements in different parts of the world and replace the old fear of over-population in a number of countries by a fear of depopulation. In 1911 Harold Cox informed the Dominions Royal Commission that they must reckon with the necessity at an early date of persuading half a million Englishmen to emigrate annually. But during the same enquiry a sub-committee, working on the basis of the provisional and estimated results of the 1910 census, concluded that English emigration would soon cease, at least as far as males were concerned.

During the last decades of the XIXth century the birth rate began to fall in a number of large industrial countries, and this movement became very marked after the war in practically all the European countries, the United States, and Japan. In Western and Northern Europe, for instance, the number of women of child-bearing age doubled in the course of a hundred years, but the number of births was no higher at the end of that period than it was at the beginning. The effects of this decline on population movements were counterbalanced, and still are in some countries, by the fall in the mortality rate which began in the XVIIIth century and has continued since that time as a result of progress in medical science and hygiene and the improvement in the standard of living. It is to this indeed that the tremendous increase in the population during the XIXth century is due. But the low mortality rate is to some extent a passing phenomenon ; as there are physiological limits to the increase in longevity, the mortality rate must inevitably rise again as the average age of the population approaches those limits. When that occurs, the decline in the birth rate will mean an actual decrease in the population.

Few countries have so far reached this stage of declining population. Since the beginning of the XXth century, however, or at least since the war, the countries which are most highly

developed economically, and had shown the most rapid increase in population up to 1900 or 1910, began to reveal the reverse trend ; and their population is now virtually diminishing. In Great Britain, for example, the annual rate of increase, which was 10.1 in 1871-1880 and 9.7 in 1891-1900, fell to 8.7 in 1901-1910, and 5.4 in 1921-1930.[1] In Germany the rate was 10.3 in 1871-1880 and 13.2 in 1891-1900 ; it even rose to 14.2 in 1901-1910, but fell to 7.4 in 1921-1930. The demographic movement in France differs from that in the two countries mentioned above in that the rate of increase, which was already slight at the end of the XVIIIth century, fell constantly thereafter (2.0 in 1871-1880 ; 1.6 in 1891-1900 ; 0.6 in 1901-1910) ; although there was a marked revival after the war (6.4 in 1921-1930), this was due entirely to a very favourable balance of migration. Since 1935, the net figure shows an actual decline in population. The American continent as a whole still shows a slightly rising rate of increase (15.0 per 1,000 in 1910-1920 and 16.8 in 1920-1930), but in the most important and economically most highly developed immigration countries of America the rate fell, often to quite a marked extent, from the pre-war decade (1900-1910) to the post-war decade (1920-1930). Between those two periods it fell from 39.7 to 28 in Argentina, from 30.6 to 29.7 in Brazil, from 29.8 to 16.5 in Canada, and from 19.3 to 14.7 in the United States.

In so far as these figures reflect the decrease in migration since the war, they cannot be used as a basis for conclusions as to the future movements of population in those countries, but in so far as they reflect a fall in the birth rate, which will have lasting effects, they do indicate future trends.

There are various methods whereby the statisticians of different countries have calculated the probable development of population in the future. Net reproduction rates are now generally considered to be the only reliable measure of the trend of the natural movement of population. These rates are calculated on the basis of fertility and mortality, with the elimination of certain factors, such as those resulting from the difference in the structure by age of the populations that are being compared. All that these rates claim to show is the results that would be reached if the present fertility and mortality of

[1] The figures for the period 1871-1910 refer to the United Kingdom of Great Britain and Ireland. For the period 1921-1930 they refer to England and Wales. During the same period there was an annual rate of decrease of 0.8 in Scotland and the rate of increase was 1.0 in Northern Ireland and 4.6 in Eire.

the population remain constant. The method adopted for this purpose by R. R. Kuczynski is to calculate the probable number of female children per 1,000 women during their child-bearing period (from 15 to 49 years) and to correct the result by means of mortality tables. A net rate of 1,000 per 1,000 (= 1) is just sufficient to maintain the population in the long run at its present level. Any difference either way indicates a tendency towards an increase or decrease in population as the case may be.

On the basis of the rates obtained by this method [1] the countries for which adequate statistics are available may be divided into three groups. [2] The first group comprises countries in which the rate of reproduction is still high enough to maintain the level of population but in which there is a general tendency towards a decline. The second group consists of countries in which the fall in the birth rate has already gone so far that the reproduction rate is no longer sufficient to maintain the population at the level of the present generation. In the third group, the reproduction rate gives promise of a continued increase in the population.

The following are some of the countries in the first group [3]:

	Net reproduction rate (units)	Years
European countries:		
Portugal [1]	1.3	1930-1931
Italy [2]	1.2	1931
Poland	1.1	1934
Netherlands [3]	1.09	1936
Hungary	1.01	1932-1936
Other countries:		
Union of South Africa	1.42	1924-1929
Canada	1.31	1931

[1] Kuczynski: 1.29 (1933). [2] Kuczynski: 0.82 (1932-1934) [3] According to Kuczynski.

It will be seen that only one North-western European country—the Netherlands—still belongs to this group.

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[1] Except where a special reference is given, the rates quoted are taken from the table of gross and net reproduction rates in the *Statistical Year-Book of the League of Nations, 1937-1938*, p. 57. The rates quoted from R. R. Kuczynski, whether in the table or in the footnotes, are taken from his article "The Population Problem", in *The Statist*, 25 December 1937-29 January 1938. The divergences between the rates calculated for the same country at two different dates show how the rate may vary within a brief period of time.

[2] It is impossible to make calculations of this kind for the Native populations of Africa, for China and the other Asiatic countries, and for various peoples of Oceania, because some of these, according to indications not based on statistics, are subject to depopulation or are even disappearing altogether, while in others there is a tendency to over-population.

[3] The same group would doubtless include the countries of Eastern Europe, and in particular the Balkan States, but the statistics available do not permit the net reproduction rate to be calculated for those countries.

The second group—countries in which the rate of reproduction is less than one—already contains a large number of European countries and even some of the newer countries.

	Net reproduction rate (units)	Years
European countries :		
Finland	0.9 [1]	1933
Germany	0.89 [2]	1936
France	0.87 [2]	1935
Switzerland	0.85	1932
Norway	0.83	1931-1935
England and Wales	0.76	1934-1936
Sweden	0.75	1931-1934
Estonia	0.73	1933-1935
Other countries :		
United States	0.96	1935
Australia	0.96	1935-1936
New Zealand	0.95	1935-1936

[1] According to KUCZYNSKI ; the *Year-Book* gives 1.07 for 1921-1930.
[2] According to KUCZYNSKI.

The third group includes, among other countries, Japan (1.5 in 1930) and probably the U.S.S.R., as well as some areas in the Far East, and the Near East.

As was mentioned, these net rates of reproduction are subject to certain reservations when used as indices of future population developments. They do not refer to a series of successive generations but to a single fictitious generation of women which is assumed to be governed constantly in the future by the laws of fertility and of mortality according to age which are observed to exist at a given moment.

An even more uncertain method of forecasting future population trends, which is nevertheless not without value, is that used since 1927 by certain statistical offices and experts : it consists in projecting into the future the population trends of the present. This method is based on the arithmetical calculation of the number of inhabitants and their age distribution in a more or less distant future (50 years or more). Some of the results obtained for certain of the larger countries are reproduced below by way of example [1]. For purposes of com-

[1] The estimates quoted are all based on the results of a recent census and assume a certain fertility and mortality rate equal to or higher than that most recently observed. When an author gives several forecasts, the one selected is that which presupposes the maintenance of the birth rate and a fall in the mortality rate below that most recently observed. Only in the case of the United States a forecast has had to be given which is based on the hypothesis of a fall of 15 per cent. in the birth rate. No account has been taken of international migration movements, except in two cases : for Italy it was estimated that there would be an excess of emigration over immigration of 400,000 persons in each decade from 1931 onwards (the net emigration between 1921 and 1931 was 950,000), and in the case of the United States the authors assumed a net surplus of immigration of 200,000 persons annually from 1935 to 1939, and 300,000 annually thereafter.

parison the population figures of 1937 are given. It will be seen that in some cases these figures exceed the maximum figures calculated in advance, which shows the somewhat limited reliability of these calculations.

	Date at which maximum will be reached	Estimated maximum (millions)	Population in 1937 [1] (millions)
Germany	1960	69.75 [2]	68
United States	1980	202 [3]	130
England and Wales	1945	40.8 [4]	41
Italy	1961	47.4 [5]	43
France	1935	41.4 [6]	42

[1] From the *Monthly Bulletin of Statistics* of the League of Nations, Nov. 1938.

[2] *Statistik des deutschen Reiches*, Vol. 401 (1927), Berlin, 1930.

[3] W. S. THOMPSON and P. K. WHELPTON : *Population Trends in the United States* (New York, 1933).

[4] Enid CHARLES, in *Political Arithmetic : A Symposium of Population Studies*, ed. by Lancelot HOGBEN (London, 1938), p. 82.

[5] C. GINI and B. FINETTI : "Calcoli sullo sviluppo futuro della popolazione italiana", in *Annali di statistica*, Series VI, Vol. X, 1931-IX, Rome, Istituto Centrale di Statistica del Regno d'Italia, 1931.

[6] According to SAUVY, quoted by M. HUBER, H. BUNLE, and F. BOVERAT : *La Population de France, son évolution et ses perspectives* (Paris, 1937), p. 214.

According to these forecasts, the maximum population for the countries in question would generally be reached at the latest in two or three decades and would be followed by a gradual but steady fall in population. The adult population, however, would still continue to increase for a certain time.

The value of these calculations must obviously not be over-estimated ; they are mere forecasts based on hypotheses. At present therefore the obsession of depopulation seems to be as exaggerated as was the Malthusian fear of over-population. The general public, ignoring the assumptions that have been made by the authors, tends to take these forecasts as strictly accurate. The facts will, however, give the lie to these calculations in spite of the care that has gone to their preparation, and indeed the facts have already done so in certain cases. In particular, no reliance can be placed on estimates for more than ten years ahead, because such estimates ignore, among other things, the action of two unknown factors : the population policy that may be adopted, and migration movements, which may have a decisive influence on the total population and the structure of the population in the countries concerned. Such as they are, however, these forecasts give some idea of the varied demographic trends to which the populations of different countries or different parts of the world are at present subject.

In so far as they take account only of the effects of the birth rate in recent years—an observed and measured phenomenon—on fertility in years to come, the results obtained are sufficiently reliable to serve as a guide in selecting and applying the best means of practical action.

Social Aspects of Demographic Trends

The existence of the divergent population trends described above brings each country, in connection with its social policy, face to face with problems the importance of which is not always fully recognised or even exactly known at the present time. There can be no question of studying the whole matter within the limits of this article, nor can any attempt be made to enumerate all these problems. Only a few indications may be given by way of example.

There can be no doubt that population changes have an influence on the employment market. The birth rate and the mortality rate directly affect the volume and structure of the labour supply. Knowledge of those rates and of their possible variations is of fundamental importance for the formulation of any employment policy or any economic policy. A Government which desires to develop or stabilise employment, or to begin, promote, or accelerate, the development of its economic resources, must not only prepare an inventory of these material resources but must also have an exact idea of the volume and composition of the labour power at its disposal and the future developments of the labour supply. It must make allowance for the number of additional workers who will enter the employment market every year, and also for the possible increase in the size of the higher age groups because of increased longevity. It must also take account of the differences in reproduction rates in various geographical areas, social classes, and occupations ; for only in the light of all these data can it draw up a practicable economic programme, frame a sound employment policy in the light of that programme, making provision for the training of the necessary groups of workers and the readjustments and transfers required to ensure the best possible balance in the employment market at any given time, and, if necessary, lay down a policy of emigration or immigration.

The influence of the demographic factor on the volume of employment available is less apparent than its influence on the

labour supply, but it is none the less definite. For a long time it was thought that an increase in population was a permanent cause of unemployment, but it was forgotten that such an increase created new needs, the satisfaction of which provided further possibilities of employment in so far as the country has the necessary resources available. A declining birth rate, by changing the age structure of the population to the detriment of the lower age groups, necessarily changes the structure of the economic needs that have to be satisfied and in consequence also the possibilities of employment in the industries which satisfy those needs. The question arises whether the decrease in the volume of employment available in industries working to meet the needs of the lower age groups, which are consumers without being producers, is counterbalanced in these circumstances by an increase in the possibilities of employment in industries producing to meet the needs of the other age groups. Or is there, on the contrary, a net decline in the possibilities of employment available for the groups of working age, which have not been depleted to the same extent by the falling birth rate ? In other words, does a falling birth rate produce unemployment, or does it not ? On this question one must content oneself with hypotheses, for the employment market is subjected to so many vicissitudes as a result of other factors, and in particular the sudden and violent fluctuations produced by economic causes, that it is difficult to discern the long-term influence of the population factor. Just because it acts over a long period, there is all the more need to foresee this influence, because any measures taken to counteract it will have to act over a long period as well, and they will therefore take effect too late if they are not applied some considerable time in advance.

The relationship that exists between the demographic factor and the employment market is also of importance in determining the attitude to be taken with regard to the employment of women, young persons, and elderly persons. The question has frequently been asked whether, in view of the situation in the employment market, the employment of women should be encouraged or discouraged, but any policy adopted on this point is bound to be shortsighted if it does not take account of the fundamental requirements resulting from demographic movements and also of the influence which the measures taken might have on those movements. A country which finds that it must combat a falling birth rate in order to provide a sufficient

supply of workers must necessarily consider whether the existing situation with regard to the employment of women is or is not in line with this policy, and whether certain of the measures taken to discourage married women from remaining in employment are likely to lead to increased fertility or, on the contrary, to reduce fertility by causing women to postpone marriage in order to remain in their employment.

The age of entering occupational life also depends to some extent on the demographic structure of the country. A country with a high birth rate and a short average life may find some difficulty in fixing a comparatively high figure for the admission of young persons to employment, because there would then be a shortage of labour which would have to be met by some means other than the employment of juvenile workers. On the other hand, a country in which the number of people in the higher age groups is relatively large will try to provide employment for these categories and, by delaying the entrance of young workers into employment, raising the school-leaving age, and extending the scope of vocational training, will seek to develop the ability of its workers and give them a higher standard of output so as to counterbalance as far as possible the shortage in numbers of the younger age groups.

In the same way, it would be possible to show the relationship that exists between the population factor and other problems of social policy, such as hours of work, holidays, spare time, hygiene, and housing. But, as was mentioned already, it is not the intention of this article to cover every aspect of the subject; it suffices for our present purpose to show the importance of the problem by a few examples. It must suffice, therefore, to conclude this enumeration by referring to two other particularly interesting cases. These are the relationship between the facts of population and social insurance and wages respectively.

Social insurance schemes have a dual influence on the population. By safeguarding the standard of living of the insured persons against social risks and at the same time organising preventive measures against those risks, social insurance tends to improve the biological standard of the wage-earning population by increasing the physical resistance to disease and by developing reserves of health. It is of great importance for a social insurance scheme, which draws part of its resources from the workers' earnings, to prolong active working life as

much as possible and reduce to a minimum the volume of premature invalidity occurring before the normal pensionable age. Every case of premature invalidity means a double loss for the insurance scheme, for it loses a contributor and therefore a certain amount of income, and at the same time it gains a pensioner and therefore has an increase in its expenditure.

The influence of population factors on social insurance is considerable. Whether the scheme is one of sickness and invalidity insurance or survivors' insurance, or one for meeting some occupational risk, changes in the distribution of the insured population by age, sex, industry, or occupation, have far-reaching consequences as regards the incidence of the risks and as regards the number of contributors and the number of beneficiaries. It is true that the influences of factors acting in contrary directions tend to cancel each other out, but at first sight a declining birth rate combined with greater longevity would seem bound to saddle the groups of working age with a growing burden which is not counterbalanced by the reduction in the number of children.

It was probably in connection with wages rather than with any other problem of social policy that the influence of the demographic factor was first recognised, although the matter is still far from being elucidated entirely. It has often been pointed out that the birth rate declines when wages rise above the minimum required for existence, but it would be important to determine the exact nature of this relationship, which may not be direct or constant. One must know whether it occurs among all classes of the population, or whether it is not rather due to the conditions of existence and the standard of living of certain strata. One may also ask whether, if wages could be raised sufficiently high to enable large families to enjoy the same standard of living as those around them, the birth rate would not rise again. It is because of their acceptance of this hypothesis that those who advocate raising the birth rate are generally in favour of systems of family allowances, but the conditions on which these have been granted and the circumstances in which they were applied would require very careful study before any definite conclusions could be drawn as to their efficacy from the point of view of population.

It should also be pointed out that, while the system of distribution of wages may have an influence on the population movements in any country, the total amount of wages depends

on the demographic factor in so far as that factor is or is not favourable to economic and social progress.

It must be emphasised again that the preceding notes are not intended to constitute an essay on, or even a plan for the study of, the relationships that exist between social problems and population problems. All that has been attempted is to raise a few questions concerning certain aspects of these problems, considered from the point of view of their mutual reactions. Fragmentary as they are, these indications suffice to show the nature of the lessons which those responsible for social policy may draw from a study of demographic facts and also the desirability of a systematic study of the relationships between population and social questions if population policy is to follow lines that will promote social progress.

Demographic Criteria

The studies described in the previous section should throw new light on the concepts of over-population and under-population by considering them from the social point of view and thus contributing to the discovery of a criterion which will meet the requirements of a national and international policy aiming at securing a better balance of population.

The faulty criteria which have too often been used for defining the demographic situation in any country have created great confusion in this field, and that confusion must be dissipated before any practical action can be taken. [1]

Even to-day, references are still frequently made on public platforms to over-population in certain countries, on the basis merely of the arithmetical density—that is, the number of inhabitants per square mile of territory. The fact that, on the basis of arithmetical density, the most over-populated country in Europe would be Belgium—which, nevertheless, has been an immigration country since the war—is sufficient to show the inadequacy of such a criterion.

The criterion of "physiological density", by which is meant the ratio of the number of inhabitants to the area of productive land, is scarcely more satisfactory. It may have a certain use for the purpose of gauging nutrition possibilities in purely

[1] For a fuller treatment of this question, cf. Imre Ferenczi: *The Synthetic Optimum of Population*. International Institute of Intellectual Co-operation. International Studies Conference. Paris, 1938.

agricultural areas where there is no trade with other regions, as is still the case at present in certain colonial territories inhabited by Native peoples. It is quite inadequate as a means of judging the demographic situation in a highly developed and industrialised country, which takes part in international trade, unless all that is desired is to measure the capacity of that country to supply its own foodstuffs in the event of a war in which it is completely blockaded.

" Agricultural density " is a more definite concept, obtained by calculating the ratio of the agricultural population—as distinct from the total population—to the area of land suitable for cultivation. This ratio may be used to measure and compare the demographic situation of districts that are only slightly industrialised, in which the great majority of the population depends on agriculture for a livelihood, the producing capacity of the land is approximately the same, the system of land tenure similar, and technical methods of agriculture only slightly developed. It loses its value in so far as these conditions are not actually fulfilled.

It was recently proposed that the demographic situation of a country might be calculated by establishing the ratio of the population of working age (15 to 65 years) to the area of the country, but it is obvious that the classification of countries by this method would differ very slightly from that obtained by calculating the arithmetical density and that the result would be equally unsatisfactory from the social point of view.

Indeed, any method based solely on the two factors—soil and population—cannot hope to provide a basis for describing or comparing adequately the demographic situation of different countries. Nor would it suffice to take account of the resources consisting of the productive power of the soil and the wealth of raw materials. For an advanced country, abundance of capital, the development of technical methods, the degree of industrial, financial and commercial education and experience of individuals, marketing facilities, the frequency and good organisation of exchanges, the balance of trade, and the balance of payments, are all resources which are equally important and which, to a great extent, condition the development of the other resources. Theoretically, it would be the ratio of the population of a country to all these factors taken together that would be required to determine the demographic situation and trends of the country in question. In practice, however, it is impossible

to make this calculation because of the multiplicity and variety of the factors to be taken into account and because of the difficulty of finding a yardstick for measuring many of them.

In these circumstances all that could be used has been a number of indirect criteria, and for a long time the one used by economists was the ratio between the total population and the total production of the country—that is to say, the output per head of the population. The index of economic density thus obtained provided a concrete expression for the conceptions of over-population and under-population. It was possible to say that a country was absolutely over-populated or under-populated when the general economic output of the area was not even sufficient to provide for the physical needs of the inhabitants. A state of relative over-population or under-population was said to exist when the population of a given area could not be increased or decreased to any appreciable extent—the other factors in production remaining constant —without causing a decrease in the individual economic output.

When used to compare the demographic situation in a given area at different times this criterion revealed whether there was a more or less marked trend towards comparative over-population or under-population in the country. When applied to several areas it provided a somewhat rough standard for comparing their demographic situation.

There is, however, one point which should be noted. Economic output may be the same in two countries, but the normal standard of living may differ considerably in the two because of differences in the distribution of wealth and of the national income. Now it is a fall in the standard of living of a people or a growing divergence between the standard of living of different peoples which gives rise to demographic tension. In order to take account of this fact attempts were made when describing the population situation or the trend towards over- or under-population in any country to supplement or replace the various statistics concerning economic density by statistics of the actual standard of living of certain typical social strata by comparison either with those of the same country at an earlier period or with those of other countries at the same period.

The purpose of this article is not to describe or criticise the methods thus employed but to outline the problem in the

solution of which they were used. The problem is to assess the density of population and the demographic movements of a country from the economic and the social points of view.

Theoretically it may be said that there is an optimum population for any country at any given time. This optimum is the figure which, in view of the total economic resources of the country, can enable the population to enjoy the highest possible standard of living. The optimum is not a fixed value, for it naturally varies according to the extent of the resources, and it should be interpreted as a curve rather than as a figure. The optimum population movement for a country would therefore be that whereby the ratio of the population to the resources of the country varied in such a way as to provide the highest standard of living compatible with the resources of the country at any given moment. A country whose population at any time falls below this optimum may be considered under-populated, which means that an increase in its population would enable it to improve its standard of living. Similarly, a country whose population is at any time higher than the optimum may be said to be over-populated. If the actual population figure of a country tends to come closer to the optimum population—that is, if the demographic movement makes an improvement of the standard of living possible—demographic tension will become less. On the contrary, it will be accentuated and may become alarming if the movement of population is such as to increase the divergence between the actual population and the optimum population, thereby producing a gradual decline in the standard of living.

In the present state of statistical information there could be no question of actually calculating the optimum population at any moment and thus plotting its curve. We cannot be certain that such a calculation will ever be possible or that it is necessary. The social optimum of population is a hypothetical assumption which is useful for clarifying ideas on the subject of the criteria of over-population and under-population. For practical purposes from the social point of view what is important is to determine whether the demographic movement of a people, given the means at its disposal to develop its economic resources, tends to lower the standard of living or not. It is through their effects on the standard of living of each country that demographic trends have a direct bearing on the efforts of all countries to achieve social progress.

It should be noted that the moral effect on a people of its demographic situation does not depend solely on the changes in its own standard of living as compared with the optimum. The moral influence becomes appreciably stronger if the relationships between that people and its immediate neighbours are such as to make it realise its own relative poverty and, by giving it aspirations to a higher standard of living, induce it to make more determined efforts to bring its own conditions up to the level of those of the other countries.

Possibilities of International Action

Speaking generally, a demographic problem exists when there is disequilibrium between the population of a country and the total economic resources at its disposal, and this disequilibrium reveals itself in a tendency towards a fall in the standard of living. To lessen the disequilibrium must therefore be the aim of any country which is following a policy of social progress. It has two possible means of achieving this purpose: it may try to alter the size of its population so as to bring it nearer what may be considered as the social-economic optimum, or it may try to develop its total economic resources so as to increase its capacity to absorb population and thus bring the social-economic optimum into line with the actual size of the population. Measures of the first kind acting directly on the population may in turn be subdivided into two groups. On the one hand there are purely demographic measures intended to change the natural movement of the population by influencing the birth rate or the mortality rate, or to improve the quality of the population by means of eugenics. On the other hand there is a policy of migration, which can be used to counterbalance the surplus or deficit resulting from the natural movement of the population.

It is very difficult to adapt the population policy of a country to the requirements of the social-economic optimum. The life force, the instinct of self-preservation in any human society, and various moral and religious views, have an influence in this field which is generally decisive. Every country agrees that everything possible must be done to reduce the mortality rate, and no country would think of giving up its efforts in that direction simply because these efforts tended to create an excessively large population. With regard to the birth rate,

there is not the same unanimity in the different countries. The tremendous decline in the birth rate in recent decades has led several countries to take steps to check this movement. In some cases these efforts are combined with measures for ensuring a selection of fit, healthy or socially desirable parents, the purpose being to increase the producing capacity of the reduced population and to lower the burden placed on the community by the maintenance of a large proportion of defectives. But there is strong opposition in many quarters to eugenic measures of this kind, and especially to the more negative measures, such as sterilisation. In countries suffering from over-population the idea of State intervention to restrict the number of births is generally rejected *a priori*. Moreover, even if the prejudices against attempts to control the number of births or the quality of the offspring were not so strong, there would still be the fact that the remedy which may be secured in this way for under-population or over-population can become effective only over a long period ; for a change in the birth rate has only a limited effect until the new generations reach the age of procreation. The effectiveness of the measures taken by certain States to give direct encouragement to the production of children is still doubtful and cannot be assessed reliably until the experiment has continued for a longer period and on a more extensive scale.

It is therefore not surprising that countries suffering from a disequilibrium in their population should have sought a more direct remedy in the form of migration. During the whole of the nineteenth century and up to the beginning of the war migration was the means used for reducing the pressure that population conditions exerted on the standard of living of countries whose economic resources were not increasing proportionately to the natural increase in the population. These transfers of population were made to countries in which the help of the additional population in developing natural resources provided a possibility of gradually raising the standard of living. But post-war conditions and, more particularly, the influence of the depression caused a gradual slackening in migration movements and even complete stagnation for a few years, followed by a tardy revival. The extent of this revival is still far from providing emigration countries with outlets for their population comparable to those which existed not only before 1914 but even before 1929. The difficulties are accentuated by the fact that

the large-scale movements of political and other refugees tend to reduce in the same proportion the openings for emigration of a more normal character. The results of this decline, which was recently described in these pages [1], were aggravated in the emigration countries by the fact that the migration of wage earners is to-day tending more and more to be of a temporary character. In their desire to retain the possibility of restoring at any moment the balance between the supply of foreign labour and the immediate requirements of the employment market, many immigration countries, especially in Europe, are inclined to admit alien workers to their territory, or to extend the length of their stay, for limited periods only. The emigration countries can therefore place less and less reliance on the departure of workers as a means of relieving the pressure of population. The temporary relief which they find in these movements is offset by the alarming prospect of the return of these masses of emigrant workers at a time when the economic situation makes their return particularly serious for the social situation of the country. Hence the tendency of those countries to consider the emigration of workers merely as a makeshift remedy and to seek elsewhere a more lasting solution for their population problems.

Interest has recently been aroused in the possibilities of migration for settlement. Unless he proves unsuccessful the settler generally leaves his country of origin for good. In this respect the interests of the immigration countries are identical with those of the emigration countries, for the purpose of a country in welcoming immigrants is to populate the country, and this cannot be done unless the settler meets with success and remains permanently in his new home. The trend of opinion which has sprung up in many immigration countries outside Europe in the last year or two in favour of a revival of migration for settlement has not so far given tangible results. The reason is that movements of human beings are closely linked up with the development of international exchanges of commodities and movements of capital. The settlement of migrants requires the investment of considerable sums for developing the land and supplying the settler with his initial equipment. The countries which should provide this capital have as a rule only limited financial resources and their chances of finding the necessary

[1] Cf. " Migration Problems ", in *International Labour Review*, Dec. 1937, Vol. XXXVI, No. 6, pp. 721-741.

sums in the international capital market depend on the amount of credit they can obtain on the security of a probable increase in their exports.

Under the present conditions of international trade practically the only hope in this direction lies in organised co-operation between emigration countries, immigration countries, and countries which could provide the required capital. That was the substance of the conclusion reached on this point by the Conference of Experts on Migration for Settlement held in the International Labour Office from 28 February to 7 March 1938 [1]. It was for the purpose of overcoming the difficulties which it recognised that the Conference unanimously recommended the establishment of an International Committee on Migration for Settlement, comprising representatives of countries which indicate their interest in the question and experts on economic, financial and social questions. The Economic Committee of the League of Nations, to which this resolution was referred, expressed the opinion that the proposed Committee " might be useful and might lead to practical results if there is such a degree of organisation among the countries concerned as will enable them to co-operate fully in the manner contemplated". Similarly, the Assembly of the League of Nations in 1938, on being informed of the steps taken by the Office in accordance with the instructions of the Governing Body to discover which States would be prepared to co-operate in the work of the proposed Committee, expressed the hope " that the Governments' replies will be of a nature to permit the establishment of such a body ".

There are, therefore, good reasons to believe that an attempt may be made by international co-operation to develop migration for settlement, the almost complete stoppage of which has from every point of view had—to quote the unanimous opinion of the representatives who attended the Conference of Experts last March—" disastrous consequences which are still being severely felt by the world in general and by the emigration countries in particular ".

The delay in this revival and the uncertainty as to its possible extent have led the over-populated countries to abandon the view that emigration should be considered as the chief remedy for the surplus population. They have tried to secure a better balance between their population and their economic

[1] Cf. " The Organisation of Migration for Settlement ", in *International Labour Review*, May 1938, Vol. XXXVII, No. 5, pp. 561-583.

resources by systematically developing the latter and using their labour supply to its fullest possible extent. [1] Programmes have been drawn up with a view to enabling these countries in the long run to do without emigration altogether as a means of maintaining the standard of living of their population, and until that aim is achieved, to decreasing the demographic pressure which the safety valve of emigration no longer suffices to relieve. The rapidity with which such a policy could be applied is, however, necessarily restricted by the shortage of capital in these countries, and consequently it would seem necessary in this field also to have organised international co-operation to hasten the development of natural resources in the over-populated countries and their adjustment to the demographic movement, if these efforts are to prove successful at an early date as a remedy for the disequilibrium between population and resources.

The possibility of financial co-operation of this kind is no new idea. It was proposed more than once, in connection with the scheme for an international policy of public works, as a means of securing the fullest possible utilisation of the world's resources of labour and equipment. At the first meeting of the International Public Works Committee the question was raised, and the general discussion brought out the desirability of directing the Committee's work towards the study of the possibility of organising international plans of public works to be financed jointly by the countries with an abundance of capital and carried out on the territory of the countries which lack capital. [2]

Thus, whether the remedy proposed for demographic disequilibrium be that of permitting a fraction of the population of the relatively over-populated countries to settle in other countries with abundant natural resources which enable them to absorb additional population, or that of hastening the development of the economic resources of the over-populated countries for which emigration does not supply an adequate outlet, it would seem that in the present circumstances the practical application of the remedy would be facilitated considerably by, and even that its effectiveness would depend on, organised international co-operation.

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[1] Cf., for example, M. WAJNRYB : " The Economic and Social Importance of the Central Industrial District of Poland ", in *International Labour Review*, Nov. 1938, Vol. XXXVIII, No. 5, pp. 660-666.

[2] Cf. " Public Works as a Factor in Economic Stabilisation ", in *International Labour Review*, Dec. 1938, Vol. XXXVIII, No. 6, pp. 727-757.

The demographic problem is an international one, and not merely because of the community of interest of all nations in their efforts to secure a parallel improvement in standards of living. It is international also because of the nature of the measures required to reduce the disequilibrium of population and to mitigate its influence on the economic and social situation of the various countries. If such practical action is to be contemplated as a means of securing an international solution of the problem, two conditions must be fulfilled.

The first condition is that the influence of the demographic factor on standards of living and on the possibilities of social progress should be understood more fully. The use of defective criteria has led to the widespread acceptance of mistaken views concerning the population situation in various countries, and has created a spirit of mistrust which is most unfavourable to any solution of the problem. The first necessity, therefore, is fuller knowledge of the real situation. This was recognised by the Assembly of the League of Nations in 1937, when it requested the Council to take the necessary steps "to draw up a scheme of work for the study of demographic problems by the Economic and Financial Organisation of the League in close collaboration with the International Labour Office". A year later, on the proposal of its Economic Committee after a preliminary survey of the question [1], the Assembly requested the Council "to constitute a Sub-Committee of Experts to study demographic problems and especially their connection with the economic, financial and social situation", and the proposed committee was set up by the Council at its January Session. It may be hoped that the work of these experts, by bringing the population problem into its true perspective, will facilitate the adoption of the best methods for solving it.

The second condition is that there should be among the co-operating countries a sufficient measure of agreement as to aims. The basis of the proposed international co-operation is the identity of interests which should unite the countries in their efforts to secure social progress. This presupposes that social progress is the aim of all the countries in question. A demographic and economic policy directed towards some

[1] LEAGUE OF NATIONS : ECONOMIC COMMITTEE : *Report to the Council on the Work of its Forty-eighth Session* (4-9 July 1938), p. 6, and Annex : "Preliminary Observations on the Drawing-up of a Scheme of Work for the Study of Demographic Problems". (Document C.233. M. 132. 1938. II. B.)

other purpose, as for instance increasing by every possible means the power of the State through a policy of demographic expansion and economic autarky without considering the effects of that policy on the standard of living of the people, would be incompatible with international action for the purpose of raising standards of living in every country by means of a better balance between demographic movements and the development of economic resources. The desire to promote social progress does not of course exclude other possible aims. Every country, for instance, is obliged to take account in its demographic and economic policy of the requirements of national safety, and in so doing it is incidentally seeking to protect its standard of living. In periods of great international instability such as the present, countries which would wish to devote their fullest attention to social progress may to a greater or a lesser extent be turned aside from that purpose and be obliged to sacrifice social progress to the interests of safety. But it must be hoped that these are merely temporary circumstances, and that they need not hold up the preparatory work for the establishment of true collaboration between the nations, based on a growing realisation of their community of interest in the work of social betterment and directed towards reducing the inequalities created between them by the differences in their demographic situation and in their material resources.

Wage Theory and Wage Policy

by

Paul H. Douglas,

Professor of Economics, University of Chicago

This is the third and last of the series of articles on unsettled points in the theories of wages and industrial fluctuations which are relevant to wage policy, written at the request of the International Labour Office by various economists who have devoted particular attention to the subject.[1] *In the present article, Professor Douglas discusses the arguments for and against the fixing of minimum wage rates by Governments or collective agreements, with special reference to the theories of marginal productivity, imperfect competition, and purchasing power.*

The Case for Wage Regulation

THE case for the collective fixing of minimum wage rates by either Government or trade union action has in the past rested on a number of contentions, of which the following are, perhaps, the most important :

(1) In a competitive society, the pressure of the consumers for lower prices is said to force down successively the prices of retailers, wholesalers, and manufacturers. The latter, in turn, seek to protect themselves by driving down the wages of their workmen. The workers can individually make only ineffective resistance to this pressure for the following reasons : (*a*) Their knowledge of the labour market and of the amounts paid for

[1] For the first two articles, see *International Labour Review*, Vol. XXXVIII, No. 6, Dec. 1938 : " Wages Policy and Business Cycles ", by E. Ronald Walker ; Vol. XXXIX, No. 1, Jan. 1939 : " Industrial Fluctuations and Wage Policy ", by Emil Lederer.

similar work elsewhere is much inferior to that of the employers. (*b*) In most years, there is a very considerable percentage of unemployed workers who are earning nothing, and whom the employers can substitute for workers who individually refuse to accept a low wage. The fear which an applicant for work, or even one who already holds a job, entertains that if he does not accept a low wage he may join the ranks of the unemployed, and hence receive nothing at all, forces many workers, therefore, to accept work on unwelcome terms; and, according to this school, at less than what the worker really produces. (*c*) Even if an employer is not able to replace a worker who objects to the terms offered, the loss of the job will generally mean a relatively greater loss to the worker than the loss of the worker's services will mean to the employer. This is because of the disparity in the relative reserves of worker and employer. The result is that the employer is much better equipped for a trial of strength, in the event that no agreement on terms is reached, than the worker; and the knowledge of this fact influences the terms of the agreement itself.

The fixing of a minimum wage by the State, it is urged, is freed from these disparities of bargaining power, and hence is justified as permitting a closer approximation of the wage to the economic or social worth of the individual and to the standards of society. The formation of unions and the fixing of wages by collective bargaining is justified in that by combination the workers acquire greater strength, with which they are able to balance the strength of the employers. This increased strength of collective action obviously comes from the fact that it is far harder to replace a large group than a few individuals, and from the ability of the workers in a union to pool reserves both to finance a collective trial of strength and to hire trained experts to represent them in bargaining. In these ways, unions become, in the words of the Webbs, dykes which protect the instinctive standard of life of the workers from the nibbling effects of competition.

This argument developed during the period when economic theorising was primarily based on the assumptions of atomistic competition and when a rather large degree of competition actually prevailed in industry. It is obviously cast primarily in terms of money rather than of real wages. For since the wage workers as a whole formed a considerable fraction of the consuming public, they would obviously gain back in low prices

a part of what they would lose in wages. But since the proportion of the national income which the wage workers receive has seldom exceeded 70 per cent., and has often gone below this, and since in economies where there are large numbers of the self-employed this percentage is still further reduced, it follows that not all the gains from low prices accrue to those who receive low wages. There would, therefore, still be some net loss for the wage workers as a whole, although this would be much less than would be inferred from an analysis of money wages alone.

(2) Where a particular group of workers lacked the mobility to shift to other occupations because of race, language, sex, or other factors, or were attached by sentiment to one line of work, it would be possible for competition to drive down their wages to inordinately low levels, and for real human exploitation to occur. For these workers confined to special industries would consume only a small fraction of the goods which they produced. In these cases, it would be difficult for unionism to get a strong foothold because of this very poverty-stricken condition. Could it do so, however, it might well raise the condition of the workers and prevent their exploitation by either the consuming public or the employers, or both. Obviously, also, minimum wage regulation by the Government would serve the same purpose. This has indeed been the primary purpose of minimum wage regulation in Great Britain [1], for the French home workers [2], and in the American States [3], and Canadian Provinces [4]. It was originally the purpose behind the establishment of wage

[1] E. M. BURNS : *Wages and the State*, pp. 89-102 (London, 1926) ; Dorothy SELLS : *The British Trade Boards System* (London, 1923) ; Report to the Ministry of Labour of the Committee of Enquiry into the Working and Effects of the Trade Boards Acts (Cave Committee), Cmd 1645 (London, 1922) ; and Minutes of Evidence before the Cave Committee (London, 1922).

[2] E. M. BURNS : " The French Minimum Wage Act of 1915 ", in *Economica*, Vol. 3 (1923), pp. 236-44.

[3] D. W. DOUGLAS : " American Minimum Wage Laws at Work ", in *American Economic Review*, Vol. 9 (1919), pp. 701-38 ; I. O. ANDREWS : *Minimum Wage Legislation* (Albany, 1914 ; reprinted from Appendix III of the Third Report of the New York State Factory Investigating Commission) ; L. D. CLARK : *Minimum Wage Laws of the United States : Construction and Operation* (Washington, 1925 ; Bulletin No. 285 of the Bureau of Labor Statistics) ; UNITED STATES DEPARTMENT OF LABOR : WOMEN'S BUREAU : *The Development of Minimum-Wage Laws in the United States, 1912 to 1927* (Washington, 1928 ; Bulletin No. 61) ; F. FRANKFURTER, M. W. DEWSON, and J. R. COMMONS : *State Minimum Wage Laws in Practice* (New York, National Consumers League, 1924) ; CONSUMERS LEAGUE OF OHIO and OHIO COUNCIL ON WOMEN IN INDUSTRY : *Operation of Minimum Wage Laws* (New York, 1924).

[4] K. DERRY and P. H. DOUGLAS : " The Minimum Wage in Canada ", in *Journal of Political Economy*, Vol. 30 (1922), pp. 155-88.

boards in Victoria during the nineties.[1] Such a system is not originally intended to fix minimum wages in all industries, but merely in those where because of peculiar conditions the workers are forced to accept wages below what similar labour can command elsewhere. But in practice there is a constant tendency—as the Victorian and other Australian experience demonstrates—for this principle to merge into a tendency towards the general regulation of wages. Logically speaking, however, such a development would have to be justified on other grounds.

(3) As combinations between employers increased as well as the percentage of output in particular industries which were controlled by a few firms, the argument in favour of trade union and Government fixing of minimum wage rates took a different turn. Such action was now advocated not merely to fix levels below which the pressure of competition was not to force wages, but also as furnishing a protection against the monopoly purchasing of labour. Trusts, cartels, and combinations, it was reasoned, were able to suppress or curtail competitive bidding for labour, and hence deprive the worker of the protection which this process formerly afforded, and force down real as well as money wages. Combined action on the part of labour was, therefore, believed to be needed to help balance and offset combined action on the part of capital and management and to win some of these " forced " gains for labour.

(4) In recent years, a fourth theory has been advanced in justification of universal unionism and of governmental action in wage matters. This is the so-called purchasing-power theory —namely, that if wages are increased there will be more monetary purchasing power available to buy mass-production goods and services ; and that this will operate to increase the amount produced and the numbers employed, and hence decrease unemployment. Such a theory assumes either that the economic system is itself out of balance, and that a considerable percentage of the workers is more or less chronically unemployed,

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[1] " Wage Legislation in Australasia ", in the Fourth Report of the New York State Factory Investigating Commission (Albany, 1915), Vol. IV, pp. 1851-2268 ; E. AVES : *Report to the Secretary of State for the Home Department on the Wages Boards and Industrial Conciliation and Arbitration Acts of Australia and New Zealand* (London, 1908) ; W. P. REEVES : *The Long White Cloud* (London, 1898) ; and *State Experiments in Australia and New Zealand* (2nd ed., London, 1923) ; George ANDERSON : *Fixation of Wages in Australia* (Melbourne, 1929) ; O. de R. FOENANDER : *Towards Industrial Peace in Australia* (Melbourne, 1937).

or that the system is about to become unbalanced. These assumptions differ from the earlier theories which were advanced both by the orthodox economists and by the social reformers. For both of these tended to assume that the foundations of the system of private enterprise were themselves sound and that business depressions, however recurringly troublesome, were no more than excrescences upon an otherwise stable organism. A full consideration of the purchasing-power theory will, however, be postponed until a later point in this article.

In appraising the various wage policies, we must consider them from at least the following points of view. (1) Is the policy in question to be confined either to one industry or to a small sector of the economy as a whole, or is it to be applied generally to all industry or to the major portion thereof? (2) Can it be assumed that the supply of monetary purchasing power furnished by the banks, and possibly by other agencies as well, will expand or contract as labour costs increase or decrease, or will this supply remain approximately constant? This is an issue of great consequence in determining the effect of given increases or decreases in wage rates. (3) Are we considering an economy where there would be full employment at the peak of prosperity, or one where it is possible to have unemployment or under-employment at the peak? (4) Are we disregarding cyclical influences and considering only what the "normal" results of a given policy might be? Or do we take cyclical fluctuations into account and consider the effects of given wage policies in terms of the various phases of the business cycle which may occur—namely, revival, prosperity, panic, recession, depression, etc.? (5) Finally, we must consider whether we are assuming conditions of perfect and atomistic competition or imperfect monopolistic competition; and, if the latter, how imperfect or monopolistic it is. The effects of monopsony, or the monopolistic buying of labour, have also to be explored.

The Theory of Marginal Productivity and Wage Policy

Three-quarters of a century ago, opposition to collective action to raise wages rested upon (1) the Malthusian theory of population and (2) the theory of the wages fund. If general wages were raised, it was thought, the death rate would fall distinctly, and the birth rate would rise at least slightly because of earlier marriages, and possibly even through increased fecun-

dity in marriage. The resultant increase in population would compel the cultivation of less fertile soil and lower the intensive margin as well. The joint yield of labour and capital would therefore decrease ; and wages would fall back to their " natural level ", which was presumed to be close to a minimum of subsistence. But it was believed to be very difficult, if not impossible, to raise general wages even initially, since there was presumed to be a fixed wages fund out of which labour was paid in advance of production. An increase in the wages paid to some was believed merely to decrease the amounts available for others.

These objections have largely been rendered invalid by subsequent developments in life and thought. On the one hand, the belief in a fixed wages fund has been exploded ; even in Taussig's skilful rehabilitation of the doctrine[1], it is evident that, though labour may be paid in advance of production, capital and land are also so paid. All factors of production are indeed paid from the same source—namely, past production—and, so far as this theory at least is concerned, labour is not necessarily limited to any fixed fraction. The recent more rapid fall of the birth rate than of the death rate in Western Europe and the English-speaking countries has, moreover, chained the Malthusian devil of over-population; and these countries instead now look forward to stationary and even declining populations despite the fact that there has been an increase in average real wages over a long period in the non-dictatorial countries.

The newer theory of distribution which has been developed in the last forty-five years is, of course, that of marginal productivity. Like the Malthusian and the wages-fund theories, this doctrine has also been used to demonstrate the supposed impossibility of securing a general increase in wages either by trade union action or by governmentally-fixed minimum rates.

Such a theory obviously deserves careful examination and analysis. It is fundamentally based upon two contentions : (1) that the workers tend to receive approximately what the last worker or group of workers adds to the social product—this is what is known as the law of marginal productivity ; (2) that if the level of wages were pushed up above this point workers would be paid more than the last group had added. Employers would, therefore, lay off some of the workers, and would continue to reduce their force until the amount added by

[1] F. W. TAUSSIG : *Wages and Capital* (New York, 1896).

the last worker or group of workers was equal to the higher wage. This would cause unemployment to increase. If there were free competition between labourers, and a fluid wage system, these men would then offer to work for less than the increased wage, since otherwise they would earn nothing. The pressure of this competition between workers would then ultimately bring wages back to the original point where the quantity of labour demanded would be equal to the quantity of labour supplied. If wages are maintained inflexibly by Government mandate or trade union agreement, then the higher wage per worker can only be maintained by keeping a proportion of the workers unemployed, and diminishing the national income in the process.

Such a theory rests fundamentally upon two pillars. The first is the principle that if one factor of production, such as labour, is increased while the other factors are held constant, while the total product will increase, it will do so at less than the proportionate rate by which the variable factor has increased. In consequence, the total product curve will increase by diminishing increments; and if these increments, or the curve of first differences, are plotted on a graph with the quantity of the factor as x, or the independent variable, they will have a negative slope. This is known as the law of diminishing marginal (i.e., incremental) productivity.

The second pillar of the theory is the assumption of a state of perfect competition, or something approaching it, under which employers compete for labour, and workers for jobs; where both labour and capital are mobile; and where there is little or no unemployment of either labour or capital except where it is caused by a rate of return higher than the marginal product of the last unit of the total supply. Let us discuss these basic arguments in turn.

If all the factors of production were to increase simultaneously and at the same rate, the most plausible assumption is indeed that the product itself would increase at that rate. That is, a doubling of the quantity of labour, of capital, and of natural resources, with technology unaltered, may be expected to produce a doubling of the product. If, however, the quantity of labour is doubled while the quantities of capital and natural resources are unaltered, the increase in the total product will be less than 100 per cent. This of necessity must be so to the degree that natural resources and capital make some contribu-

tion to the total product, since a doubling on their part in conjunction with that of labour is required to double the total product. If they are held constant, and labour alone is increased, then we should expect a smaller relative degree of increase in product than in the quantity of labour alone. This increase of product will be according to some such curve as that shown on a logarithmic scale in figure 1. Here, a doubling in the quantity of labour causes product to increase by 75 per cent. The line representing the relationship between (1) total product, or y, and (2) quantities of labour with capital and natural resources constant, or x, is therefore fitted to the function $\log y = a + .75 \log x$ where a has a positive value. It would perhaps be clearer were the a term omitted so that $\log y = .75 \log x$.

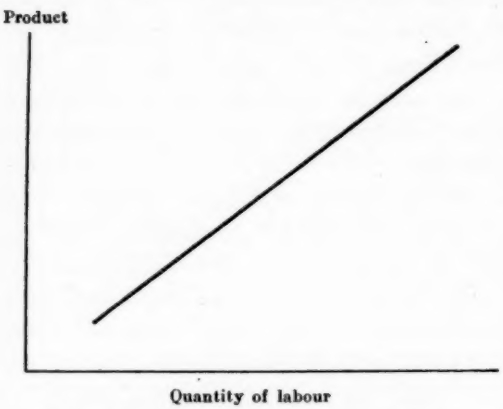

FIG. 1. — An illustration of the relationship between changes in the proportionate quantity of labour (other factors constant) and the proportionate quantity of product (double logarithmic scale).

Such a curve of total product carries with it the principle that the increment by which the total product grows decreases with each unit addition of labour. A simple arithmetical illustration is given in table 1, which should make this clear. The key

TABLE 1. AN ILLUSTRATION OF THE EFFECT UPON TOTAL AND INCREMENTAL PRODUCTION OF INCREASING THE QUANTITY OF LABOUR IN RELATION TO THE QUANTITY OF CAPITAL AND NATURAL RESOURCES

Quantity of factors		Percentage increase in labour as compared with previous quantity	Percentage increase in product (75 per cent. of proportionate increase in labour)	Amount of increase in product (col. (4) applied to preceding items in col. (6))	Total product (preceding product plus increment of col. (5))
Labour	Natural resources and capital				
(1)	(2)	(3)	(4)	(5)	(6)
1	1				1.0
2	1	100	75	(1.0 × .75) =.75	1.75
3	1	50	37.50	(1.75 × .375) =.6563	2.4063
4	1	33 1/3	25	(2.4063 × .25) =.6016	3.0079
5	1	25	18.75	(3.0079 × .1875)=.5626	3.5705
6	1	20	15	(3.5705 × .15) =.5356	4.1061
7	1	16 2/3	12.50	(4.1061 × .125) =.5232	4.6293

to this illustration is the fact that the percentage increase in production is only three-fourths of the percentage increase in the number of labourers. It will be seen from this (column 5) that the absolute amounts of the increments to the total product which are caused by the addition of another worker diminish as successive workers are added. These are shown separately in figure 2, and illustrate the principle of diminishing incremental or marginal productivity.

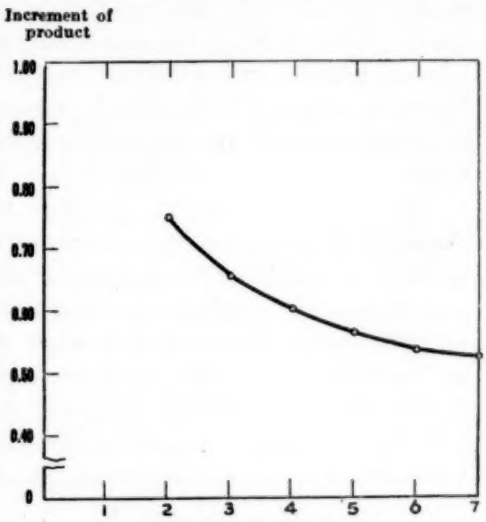

FIG. 2. — Illustrative effect of increases in quantity of labour upon increments to total product (based on table 1).

If there is perfect and atomistic competition for labourers and for jobs, the amount added by the last worker will tend to be the wage paid to each [1]. For if the wage is less than this amount the quantity of labour demanded by employers will (under perfect and atomistic competition) be more than that supplied, since employers will profit from hiring workers whose wages will be less than what they add to the product. But if more workers are demanded than can be supplied the inevitable result under such conditions is that employers will compete against each other for labour by raising the rate of wages. This process will go on until the wage is raised to the point where the quantity of labour demanded is equal to that supplied. The point at which the wage is equal to the amount added to the product by the last worker or group of workers is the point at which the market is cleared by making the quantities of labour which are demanded equal to those which are supplied.

Conversely, if wages are raised above this point, and if the banks do not expand credit or the Government monetary purchasing power, the employers will demand fewer workers, since they will not want to pay more to workers than they add

[1] In this, we assume homogeneity between the different units of labour.

to the product. This, as has been stated, will create unemployment. If governmental or trade union regulations are not imposed, then these unemployed will be able to find jobs by offering to work for less; and this process will go on until wages are once again reduced to the point of marginal productivity, where the quantity of labour supplied will be equal to that demanded. If this lowering of wages is made impossible by governmental action through the fixing of a minimum, or through collective bargaining, the result will be that a permanent group of unemployed is created, unless by the growth of capital and the improvement of technology the marginal productivity for the labour supply as a whole is raised to the level of the new wage.

The next issue which presents itself is that of the actual slope or elasticity of this curve of diminishing marginal productivity, which under pure and perfect competition we may identify as the ultimate demand curve for labour. Let us first consider what would happen were the coefficient of elasticity to be less than unity, and its reciprocal, the coefficient of flexibility, to be greater than unity.[1] This would mean that a change of a given proportion in the quantity of labour would be accompanied by a larger proportionate change in the wage or marginal productivity—i.e., $\Delta \log \frac{\Delta P}{\Delta L} > \Delta \log L$. In this case, an increase in wages per worker would be accompanied by a smaller proportionate decrease in the number of workers employed, so that the total wages paid $\left(\frac{\Delta P}{\Delta L} . L\right)$ would be greater even though the total national income would be less. Under such conditions, an increase in wages, whether obtained by trade union or governmental action, would benefit the working class taken as a whole. It would be possible, for

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[1] By the elasticity of demand curve for labour, or the marginal productivity curve when L = labour and P = product, we mean :

$$\frac{\frac{\Delta L}{L}}{\frac{\Delta \frac{\Delta P}{\Delta L}}{\frac{\Delta P}{\Delta L}}} \quad \text{or} \quad \frac{\Delta \log L}{\Delta \log \frac{\Delta P}{\Delta L}}$$

The reciprocal of this coefficient measures the flexibility of the curve, or the proportional rate at which marginal productivity changes with relative changes in the quantity of labour :

$$\phi_L = \frac{\Delta \log \frac{\Delta P}{\Delta L}}{\Delta \log L}$$

example, for those employed to maintain the unemployed at full wages and enjoy a surplus into the bargain.

If, however, the elasticity of the marginal productivity curve is greater than unity and its flexibility correspondingly less than unity — i.e., $\Delta \log L > \Delta \log \frac{\Delta P}{\Delta L}$ — then it follows under perfect and atomistic competition that the relative decrease in the numbers employed will be greater than the relative increase in the wage of those employed. Under these conditions, the total return to labour will be less than before. Either the employed will profit at the expense of greater losses suffered by the unemployed [1], or the competition of the latter will draw wages back to or near the original competitive level.

While it is not easy to determine what the actual slope of the marginal productivity curve for labour is, there is a growing body of evidence and reasoning to suggest that it is appreciably greater than unity. In the first place, it can be demonstrated mathematically that taking P as production, L as labour, and C as capital, and disregarding for the moment natural resources, then if $P = b\,L^k\,C^{1-k}$ the flexibility of the marginal productivity curve for labour is equal to the exponent for capital, or $1\text{-}k$. [2] This, in the formula chosen above, is always less than unity as long as k has a positive value—that is, as long as labour makes some contribution to production. But since the coefficient of elasticity — $\frac{\Delta \log L}{\Delta \log \frac{\Delta P}{\Delta L}}$ — is merely the reciprocal of the coefficient of flexibility — $\frac{\Delta \log \frac{\Delta P}{\Delta L}}{\Delta \log L}$ — it follows that under these conditions the elasticity will be greater than unity.

The present author and several associates, notably Professor Charles W. Cobb, Mr. Aaron Director, and Mrs. Handsaker, have carried through a number of studies concerning the relations between historical changes in the quantities of labour, capital, and product, in manufacturing in the United States,

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[1] The lot of the latter might, of course, be ameliorated by unemployment benefits paid from taxes drawn from "surplus" incomes.

[2] For proof, see the mathematical appendix to an article by Marjorie Handsaker and Paul H. Douglas: "The Theory of Marginal Productivity Tested by Data for Manufacturing in Victoria", in *Quarterly Journal of Economics*, Feb. 1938, Vol. 52, pp. 251-55.

Massachusetts, New South Wales, and Victoria, and have found the following "normal" effects of (*a*) an increase of 1 per cent. in the quantity of labour with capital constant, and (*b*) an increase of 1 per cent. in the quantity of capital with labour constant. [1]

Country	Period	Percentage increase in manufacturing product with increase of 1 per cent. in given factor alone	
		Labour	Capital
United States	1899–1922	.75	.25
Massachusetts	1890–1926	.74	.26
New South Wales	1901–1927	.65	.35
Victoria	1907–1929	.71	.29

It will be noticed that there is a substantial degree of uniformity in the results. The divergence of the New South Wales percentages is partly due to the nature of the index of capital, which is computed on a somewhat different basis from that followed in other studies. [2]

These results indicate that an increase of 1 per cent. in the quantity of labour would normally cause (so far as the manufacturing industries during these periods are concerned, and if other things are constant) a decrease of from $^1/_3$ to $^1/_4$ of 1 per cent. in the marginal productivity of labour. The elasticity of the marginal productivity curve is the reciprocal of its flexibility, or the relative percentage change in a factor which is required (if other things are equal) to effect a change of 1 per cent. in the marginal productivity of that factor. According to the studies mentioned, it would apparently be for labour in manufacturing somewhere between –3.0 and –4.0.

[1] For the statistical and mathematical evidence upon which the results are based, see Paul H. DOUGLAS : *The Theory of Wages* (New York, 1934), pp. 113-202 ; and Marjorie HANDSAKER and Paul H. DOUGLAS : "The Theory of Marginal Productivity as Tested by Data for Manufacturing in Victoria", in *Quarterly Journal of Economics*, Nov. 1937 and Feb. 1938.

[2] It made a provision for the replacement of depreciated capital at higher price levels. This gave a lower index of capital, and by bringing this index closer to that of product increased its exponent and decreased that of labour.

I have stated elsewhere [1] the consequences of all this under the assumptions of a competitive economy:

> The fact that the elasticity of the demand for labour seems to be between —3.0 and —4.0 indicates that where unemployment is caused by a wage rate which is higher than marginal productivity, a reduction of one per cent. in the rate of wages should normally lead to an increase of 3 or 4 per cent. in the volume of employment, and hence to an increase in the total income of the workers of from 2 to 3 per cent. If wages are pushed up above the point of marginal productivity, the decrease in employment would normally be from three to four times as great as the increase in hourly rates, so that the total income of the working class would be reduced in the ratio indicated above. It should also be noted that Pigou in his recent *Theory of Unemployment* arrives by almost purely deductive methods at an almost identical estimate of the elasticity of demand for labour during periods of depression, namely that it is " probably not less than —3.0 ".

Under such a production formula as we have indicated, the share of the value product received by a factor corresponds under perfect and atomistic competition to its own exponent. [2] We should expect labour, therefore, to have received approximately 75 per cent. of the value product of American manufacturing during the years 1899-1922. For the years 1909-1917 inclusive, labour's share, according to the National Bureau of Economic Research, was 74.1 per cent., or surprisingly close to what we should expect from the formula. Unpublished results for Massachusetts also indicate a close correspondence between the share of the product received and that imputed by the formula. In the cases of New South Wales and Victoria, there is a greater disparity. Here the share actually received by labour seems to have been 56 and 61 per cent. respectively, instead of the 65 and 71 per cent. which would be expected by the formula. [3] There is also a fairly close correlation between year-to-year changes in average value product and in real wages.

While the case is by no means closed, there is an accumulation of evidence to indicate that diminishing marginal productivity does apply in practice, and that we may be approximating

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[1] Paul H. DOUGLAS: *op. cit.*, p. 501.

[2] For the proof of this, see Paul H. DOUGLAS: *op. cit.*, pp. 150-151; and Marjorie HANDSAKER and Paul H. DOUGLAS: *loc. cit.*, Feb. 1938, pp. 251-255.

[3] Unpublished studies by Mr. C. M. P. BROWN of Clare College, Cambridge, also indicate for New Zealand a precise agreement between the exponent of labour and its share in manufacturing. The exponent, however, seems to be distinctly lower even than that for New South Wales.

the slope of these curves. Figures 3 and 4 show the probable historical marginal productivity curves for labour and capital in Victorian manufacturing for the years 1907-1929.

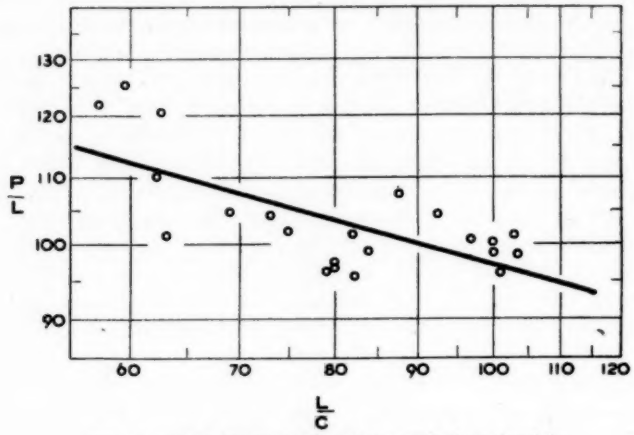

FIG. 3. — The indicated historical marginal productivity curve for labour in Victorian manufacturing for the period 1907-1929 (double logarithmic scale).

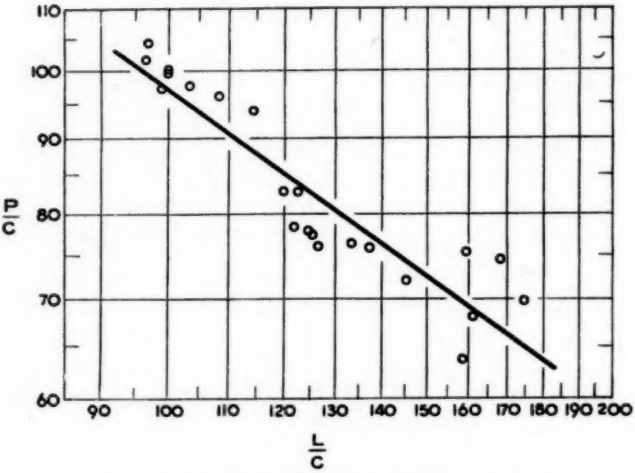

FIG. 4. — The indicated historical marginal productivity curve for capital in Victorian manufacturing for the period 1907-1929 (double logarithmic scale).

Would these conclusions be modified greatly if the sum of the exponents of the factors of production were more than unity ? Here $P = L^k C^j$, where the sum of j and k is more than 1.0. Under such a formula production would increase faster than the factors of production because of the so-called

"internal" and "external" economies.[1] But it is difficult to see how this would change the basic results. As long as the exponent for capital was less than unity, the elasticity of the normal marginal product curve for labour would be greater than unity, and *vice versa*. For, since the exponent for labour, by almost any formula, is found to be very appreciably higher than that for capital, if j, the exponent of capital, were to be greater than unity, then the sum of the exponents would be appreciably more than 2.0. This would mean that a doubling in the quantity of both labour and capital would cause more than a quadrupling in the quantity of product. This is clearly fantastic.

But if the exponent for capital is less than unity, as it almost surely is, then the elasticity of the marginal productivity curve for labour would be greater than unity. In fact, the application of the formula $P = b\,L^k\,C^j$ seems to give exponents whose sum does not greatly vary from unity. Mr. David Durand,[2] in applying this formula to my data for the United States, found their sum to be only 1.01, or only $^1/_3$ per cent. above unity. Mrs. Handsaker and I, in our study for Victoria,[3] found it to be 1.067. But such a formula in the latter case gave b a value of only .71, as compared with .97 under the $L^k\,C^{1-k}$ formula. So low a value of b gives the formula a doubtful economic meaning.

It is true that in one respect a complication would be introduced by such a relationship. Under such conditions, (1) the marginal productivity of labour multiplied by the number of units of labour plus (2) the marginal productivity of capital multiplied by the number of units of capital will be greater than (3) the total product—i.e., $\left(\frac{\Delta P}{\Delta L}\cdot L\right) + \left(\frac{\Delta P}{\Delta C}\cdot C\right) > P$ It is obvious that in such a case the share received by each factor could not be precisely equal to its own exponent, nor the basic wage rate precisely that of marginal productivity. But that marginal productivity would be a dominant, although not an exclusive, force in determining unit and factorial returns would seem to be fairly obvious. If this is so, then the slope of the marginal productivity curve which we have already discussed would be of crucial importance.

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[1] And in the case of time series because of technological improvements.

[2] David DURAND: "Some Thoughts on Marginal Productivity with Especial Reference to Professor Douglas's Analysis", in *Journal of Political Economy*, Dec. 1937, p. 755.

[3] Marjorie HANDSAKER and Paul H. DOUGLAS: *loc. cit.*, Feb. 1938, pp. 215-250.

A further criticism of the production formula $P = L^k C^{1-k}$ is that it provides for constant exponents and elasticities over a period as a whole but does not provide for changing elasticities from year to year depending upon technological factors and the changing proportions of labour and capital [1].

It is surely an error to conclude, as does Professor Cassel, that the exponents must change as the proportions of labour and capital change. On the contrary, if the logarithms of the marginal productivity function are described by a straight line when fitted to the logarithms of the ratios of one factor of production and the others—that is, if the curve of decreasing marginal productivity has a constant elasticity throughout its course—then the exponents will be constant throughout, and the principle of marginal productivity will call for constant shares of the total product to be paid to each of the factors, irrespective of the proportions in which the factors are combined. It is, therefore, quite possible for the exponents to be constant even as the proportions of the factors change.

It is, however, quite possible that the exponents may change, and this will be the case where the respective marginal productivity curves have not a uniform elasticity throughout their course. To the degree that the slopes of these curves do change, the exponents will also change. This has always been stated explicitly by the present author, for example, and we have in our work fitted straight-line logarithmic functions (1) merely as first approximations and (2) to obtain norms for a period as a whole.

While year-to-year fluctuations in the exponents may be appreciable because of business-cycle factors, it is not yet clear whether there have been any large changes in their values over moderately long periods of time. For example, to the degree that the distribution of the national income between labour and capital is controlled or strongly influenced by the production function, we may possibly infer something about the relative constancy of the production function from the relative constancy of the distributive shares. Thus Bowley, in his study of British national income from 1860 to 1935, has found that during this period of three-quarters of a century

[1] This point—among others—is, for example, made by Professor CASSEL in his book *On Quantitative Method in Economics* (Oxford, 1935), p. 137. For a reply to this book, see Paul H. DOUGLAS: "Professor Cassel on the Statistical Determination of Marginal Productivity", in *Canadian Journal of Economics and Political Science*, Feb. 1938, pp. 22-33.

the proportion which has gone in the form of wages and salaries to labour has remained relatively constant at 62 to 68 per cent. [1] There is also apparently a considerable degree of uniformity among industrial countries as regards the relative shares of the national income received by labour and ownership respectively, as is shown by the set of estimates by competent authorities given in table 2.

TABLE 2. ESTIMATES OF PERCENTAGES OF NATIONAL INCOME RECEIVED BY LABOUR IN DIFFERENT COUNTRIES AND AT DIFFERENT PERIODS

Country	Period	Author	Percentage going directly to	
			Labour	Capital and land
Great Britain	1880	Bowley [1]	62½	37½
Great Britain	1913	Bowley [1]	62½	37½
Great Britain	1924	Bowley [2]	67½	32½
Great Britain	1935	Clark [3]	65½	34½
United States	1909–18	King [4]	71	29
United States	1919–35	Kuznets [5]	67.3	32.7
Canada	pre-war	Stamp-Dalton [6]	62½	37½
France	pre-war	Stamp-Dalton [6]	61	39
Germany	pre-war	Stamp-Dalton [6]	60	40
Germany	1928	Bresciani-Turroni [7]	66	34
Australia	pre-war	Stamp-Dalton [6]	70	30

[1] A. L. BOWLEY: *The Change in the Distribution of the National Income, 1880-1913* (Oxford, 1920). If income from overseas were excluded, the share of labour would have been 65.6 and 69 respectively in 1880 and 1913.

[2] A. L. BOWLEY: *Wages and Income in the United Kingdom since 1860, op. cit.*, p. 84.

[3] Colin CLARK: *National Income and Outlay* (London, 1937), p. 94.

[4] NATIONAL BUREAU OF ECONOMIC RESEARCH: *Income in the United States* (New York, 1922), Vol. I, p. 97. These figures are not strictly comparable with the others since they include only manufacturing, mining, and transport, and do not include agriculture, commerce, or Government service. They also include pensions, and compensation for injuries. The exclusion of these items would probably lower labour's share by about 1 per cent.

[5] Simon KYZNETS: *National Income and Capital Formation*, 1919-1935 (New York, 1937), p. 25. In only one year did labour's share fall more than 1 percentage point below this average. There was almost complete constancy in the proportions which labour received. Capital and land are credited by me with all amounts which labour did not receive. In practice labour received through compensation, pensions, and relief, a larger share in the later years, but this was because of taxation and governmental policy in other matters than wages.

[6] J. C. STAMP: "The Wealth and Income of the Chief Powers", in *Journal of the Royal Statistical Society*, July 1919; and Hugh DALTON: *Some Aspects of the Inequality of Incomes in Modern Communities* (London, 1920), p. 209.

[7] C. BRESCIANI-TURRONI: "On Some Changes in the Distribution of Income and Property in Germany after 1913", in *Revue al Quanon Wal Iktisâd*, Cairo, 1931, p. 159.

[1] A. L. BOWLEY: *Wages and Income in the United Kingdom since 1860* (Cambridge, 1937). The estimates for the various years are, of course, not precisely comparable. Salaries, however, form a very large fraction of the amount paid in wages and salaries; and, in view of the class structure of British society, a considerable proportion of these payments are not made according to strict economic principles, but rather according to social prestige and position. Labour has gained relatively, however, through the taxing system, by which approximately a tenth of the national income is used for social services, almost exclusively for the low-income groups, but the money for which is—in the main—furnished by the upper economic groups through taxation. See POLITICAL AND ECONOMIC PLANNING (PEP): *Report on the British Social Services* (London, 1937). Similar gains, though to a lesser degree, have also been made in the United States.

There is thus considerable evidence to indicate that there is a very appreciable degree of constancy under the capitalistic system in the shares received by the factors of production [1]. This, by inference, implies that there is more constancy in the numerical value of the production exponents of labour and capital than the critics of the theory are customarily disposed to admit.

Application to Individual Industries

Thus far we have dealt solely with the question whether collective bargaining or the governmental fixation of wage rates could raise wages if applied universally to all industry in a capitalistic society characterised by " perfect " and " pure " competition.

If we turn to the issue whether it is possible for the real wages in particular industries to be pushed up by such methods, the case is much clearer. If there is completely atomistic competition within an industry, and no enterprise produces more than an infinitesimal fraction of the total output, then changes in the output of a given concern would have no effect on unit price. As additional workers were hired by a firm, total product would not increase in as great a ratio as the number of workers; and the increment to the product added by successive workers would diminish. But the decrease in the marginal productivity of labour would be solely a consequence of this physical law, since the prices at which the physical units sold would remain unaltered irrespective of what the output of the individual establishment might be.

For an individual industry as a whole, however, or any considerable fraction of it, even though it does consist of a multitude of small units, an increase in the total output would lower unit price. The slope of the curve of marginal value product is, therefore, steeper and less elastic than that of marginal physical product, because the successive increments of physical product cause price to fall at the same time. Hence an additional group of workers distributed over the industry would not only add a smaller number of physical units of product than the

[1] The fact that the percentages of the total national income received by labour seem to be somewhat less than the exponents of labour for manufacturing alone may well be explained by the fact that we should not expect the exponents for the economy as a whole to be the same as for manufacturing.

preceding group, but each of these units would also sell at a lower price. [1]

Where the slope of the marginal value productivity curve for an industry has an elasticity of less than unity, a trade union by bargaining, or the Government through wage fixation, could raise wages per worker in a greater proportion than that by which the number of workers would be reduced. The total amount paid out in wages would therefore be greater than before; and those employed could maintain, out of their own earnings and at full rates, those unemployed and yet realise a surplus for themselves and for the group as a whole.

Where, however, the slope of the value productivity curve for an industry has an elasticity greater than unity, a pushing up of wage rates will result in a greater proportionate increase in the numbers of the unemployed. The result, in such circumstances, is that the total amount of wages received by the group as a whole will be less than before. Those who continue to be employed will, of course, for the time being at least, receive more. Whether these gains can be continued at the expense of the other workers will depend upon the methods adopted. If free access to work in the form of a genuine "open shop" is permitted, we may expect the competition of the unemployed workers to force wages back to the original point of marginal social productivity. There would be something of the same pressure if the shop were "closed" to non-union men, but the union itself were open, although here the loyalty of the unemployed union members to the union rate might keep the wage above the point needed for the full employment of those formerly employed.

If the union, in addition to enforcing a "closed shop", is itself relatively "closed", it can shut out from employment in the industry those who lost their jobs because of the forcing up of the wage rate. It could do this (*a*) by imposing unreasonable apprenticeship regulations unduly limiting the ratios of apprentices to journeymen and prolonging the period of apprenticeship beyond the time required to learn the trade [2], (*b*) by requiring

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[1] All the units would, of course, sell at a lower price. The importance of this point will be seen from the subsequent discussion of marginal revenue.

[2] The problem of determining what is a proper ratio of apprentices is, of course, complicated. If (1) 4 years are required to learn a trade and (2) the average working life of a journeyman is 36 years and (3) the trade is neither increasing nor decreasing, then the ratio should be approximately 1 to 9 (36 : 4). If the trade is growing, a ratio greater than 1 to 9 is needed; if it is decreasing, a smaller ratio.

high initiation fees—it is not an unusual practice, for example, for the craft unions in the United States to have initiation fees which run into hundreds of dollars [1]—or (*c*) by an outright limitation of numbers. Where such practices are successfully carried out, those squeezed out of the industry in question are either forced into the ranks of the unemployed or compelled to enter other industries, where they will force down marginal productivity, and hence lower the level of wages.

In this way, monopoly differentials of wages may be built up, and a class stratification within the ranks of labour created. If a considerable degree of skill is required to enter an industry or trade, this monopoly control can be exercised in a relatively polite and decorous manner through controlling the means of teaching and learning the trade. The learned professions as well as the skilled trades have thus been able to obtain monopoly advantages and to do so in a genteel manner. Where the union is composed of relatively unskilled workers, it cannot use such decorous methods and is driven to protect its position by the rougher methods of force. It is this fact which explains in part why the unions composed of relatively unskilled workers who are receiving a wage greatly above that of other unskilled workers feel compelled to resort to methods which draw down upon their heads denunciation from those in walks of life where similar control can be exercised in a more gentlemanly but no less effective manner.

Let us return, however, to the case where, owing to the inelasticity of the curve of marginal value productivity, an increase in wages above the point of original marginal value productivity will net a larger sum for the workers as a whole. The reduction in the numbers of men and in the amount produced will, of course, send up the unit price of the commodity produced. The gains of labour will come, therefore, not merely from (1) the reduced amount available for the payment of rent, interest, and profits, on account of the smaller residue of physical product after the marginal physical product multiplied by the number of workers is subtracted from the total physical product, but also from (2) an increased total payment made by consumers for the smaller quantity in those cases where the elasticity of demand for the commodity is less than

[1] One should not, of course, condemn all craft unions on this score. In some, the fees are reasonable. Full publicity as to these practices is, however, needed.

unity.[1] In such a case, however, monetary purchasing power is withdrawn from other industries, with the result that the demand curve for other articles will be shifted to the left, and the marginal value product per worker decreased. In this case, therefore, to the degree that perfect and pure competition exists between employers in these other industries, wages and the return to other factors will either have to be reduced or, if maintained, can only be continued at the expense of creating sufficient unemployment to bring the marginal value productivity up to the point of the wage paid.

Adaptation to Imperfect Competition

Let us now, however, face the fact that in real life the conditions of perfect and pure competition are seldom, if ever, fully met. At least two sets of conditions are presupposed. The first set exists where there are (1) an almost infinite number of producers of a commodity, so that changes in the output of any one unit have no effect on the price of the article, causing the demand curve for the products of that establishment, therefore, to have infinite elasticity—this is an example of perfect competition among sellers—and (2) an almost infinite number of buyers of labour power, so that changes in the amount of labour power purchased by any one enterprise will have no effect on the supply price of labour. The supply price of labour for any one establishment will, therefore, under these conditions have an infinite elasticity. This is perfect competition between buyers [2].

The second set of conditions which are essential for completely pure competition are the following.[3] (1) There is free and complete competition among the employers for labour. (2) There is free and complete competition among the wage earners for work. (3) Capital is mobile and can be transferred from industry to industry and from place to place. (4) Labour is mobile and can be transferred from industry to industry and from place to place. (5) Either all labour is employed or the only cause for

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[1] The elasticity of the marginal value product curve could, however, be less than unity even though the elasticity of demand for the product were greater than unity, since the negative elasticity of the marginal physical product curve is combined with the second in order to form the first.

[2] See Joan Robinson: *The Economics of Imperfect Competition* (London, 1933), chapters 1-4, 17, and 18.

[3] Paul H. Douglas: *op. cit.*, pp. 69-71.

the unemployment of labour is a wage in excess of the marginal productivity of labour. (6) Either all capital is employed or the only cause for the unemployment of capital is an interest rate in excess of the marginal productivity of capital. (7) The employers and entrepreneurs—whether consciously or unconsciously—are able to measure the marginal contributions of labour and capital, and govern their payments for wages and interest accordingly. (8) The bargaining powers of labour are equal to those of the owners of capital and those of the entrepreneurs. To the degree that these assumptions do not describe the facts of real life, the conclusions which have thus far been drawn from the deduction aspects of the marginal productivity theory require serious qualification.

Restricted Competition for Labour.

Let us first consider the changes required in the theory where there is a limited number of firms which hire labour, and where these firms have either a tacit or an explicit understanding concerning the rate of wages to be paid, and a mutual agreement not to raise it by bidding against one another. Such a situation enables wages to be kept below marginal productivity. For the force which is relied upon by the orthodox economists to raise wages to the point of marginal productivity should they chance to fall below it is the competition of the employers. The workers will be adding more than they will be receiving, and hence under competition it is presumed that employers will be anxious to hire more labourers upon whom they will make a profit. In order to attract this labour they will be forced under competition to raise their bid. Since there is presumed to be no cohesion between employers, and they are instead assumed to compete against each other for labour, this process will go on until wages have been raised to the point of marginal productivity, and all profits derived from hiring labour at less than its marginal productivity have disappeared.

But if the employers have an understanding not to raise wages above a given point and hold to this understanding in practice, then there is no force to bring up wages. Under these conditions, wages can be fixed initially at less than marginal productivity, and kept there. The employers, by refraining from bidding against each other, can then collectively and individually retain the profits derived from paying to labour less than it adds to the product or income of the concern,

instead of surrendering this amount to labour through the process of competition.

How important, then, are such effective understandings? In towns dominated by one firm, as is usually the case in the mill villages of the South, and frequently in the towns and smaller-sized cities of other parts of the United States, it is obvious that there is little or no competition so far as the local market is concerned. The wage which the dominant firm decides upon becomes by that very act the prevailing wage for that locality. It obviously may be below the point of marginal productivity, and since immediate profits at least will be greater, the more wages are below this point, there will be a powerful incentive for the employer to put and keep them there.

The force which is primarily relied upon to raise wages in these circumstances to the level of marginal productivity is the competition of firms in other localities and areas. If the wage in one locality is below marginal productivity, it is said, workers will migrate to other localities where, owing to competition, the wage is equal to the marginal product. Unless the firm or firms in the first locality raise wages, they will lose their workers and be compelled seriously to contract operations. It is thus argued that, provided there are a number of centres of free competition, their influence will be sufficient to keep the others up to the competitive standard.

But this is much too optimistic a view. In the first place, labourers are not as mobile as is commonly assumed. Those who work in single-firm towns and receive a wage less than marginal productivity are frequently tied to that town by sentiment, friendships, family affiliations, etc., which make it very difficult for them to pull up stakes and move elsewhere. Then, if in addition a worker owns his home, or a large equity in it, he is still more reluctant to move, lest in doing so he be forced to sell his home at a heavy financial loss or be unable to realise from it. This, therefore, also holds him to his town, unsatisfactory though his wage may be. If he is in debt, he tends to be still further chained. "Man", remarked Adam Smith, "is of all commodities the most difficult to be transported."

Furthermore, in a very large percentage of cases, movement from one town or small city to another merely means moving into another place where wages are set more or less authoritatively by the big employer or employers of the new locality. How much, for example, will a Southern mill-worker benefit

himself by moving from one mill village to another ? The same question may be raised for wide areas in the North, Middle West, and West, of the United States. All too often a worker merely moves from one place where the wage is monopolistically set to another place where it is similarly set. Under these conditions, the prospect of attaining competitive freedom through migration is almost as illusory as the invitation to sincere pacifists in a war-swept world to leave one country for another if they do not like the prospect of being forced to fight in their native land.

A large degree of monopolistic fixation of wages can also occur in localities where there are several or even a relatively large number of big employers. These men meet socially, and during many of their leisure hours associate almost constantly with each other. They also have business groups such as trade associations, employers' associations, and chambers of commerce. It is unrealistic to assume, as so many orthodox economists seem to do, that these men seldom talk or reach agreements about the wage policies which they should pursue in common. On the contrary, there is a considerable body of evidence that understandings on these points are frequently reached and observed. We know that business groups combine for the purpose of fixing prices. And the dictum of Adam Smith is as substantially true to-day as it was one hundred and sixty years ago—namely, that "people of the same trade seldom meet together, even for merriment and diversion but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices". If concerted action is practised to increase profits by raising prices above their competitive level, why is it not also possible to increase profits by keeping wages below what would otherwise be the competitive level ? Moreover, even where no formal compacts are entered into by the employers, there is commonly a large degree of fellow-feeling amongst them. A business man who raises wages above the prevailing level is likely to find that he is unpopular among his class and his associates. Men do not like to experience this, and the fear of social opprobrium, therefore, restrains many business men from increasing wages, and hence restricts competition. This force, of course, operates more strongly in the smaller and middle-sized cities than it does in the great metropolises.

But even in these large cities, where there is certainly more competitive bidding for labour than elsewhere, there is some

indication that a degree of united action by the big employers exists. The LaFollette Sub-Committee of the United States Senate, for example, found that the men in charge of labour relations for a considerable number of the largest corporations were accustomed to meet monthly at Rockefeller Center in New York, and that among other topics raised for discussion was the prevailing rate for unskilled labour. It would be but a step to turn from discussing what was the prevailing rate to that of deciding what it should be in the plants of these companies. And, since these firms, in their aggregate, employed well over a million workers, any such decision would have a decided influence upon the general rate of wages itself.

All these considerations should indicate that even in the United States there is undoubtedly a large degree of either concerted action by employers to fix wages at less than marginal productivity, or reluctance to raise wages to that level. Without wishing to indulge in any invidious national comparisons, it may nevertheless be hasarded that in other industrial countries, with their more compact boundaries, and with more sharply class-conscious groups of employers, there is commonly an even greater degree of combination to restrict the competitive bidding for labour.

Under these conditions, it is obvious that trade unions or minimum wage orders issued by the Government can raise wages up to the point of marginal productivity without diminishing employment or increasing unemployment. By opposing the collective pressure of labour against the collective pressure of the employers, wages can—in these circumstances—be forced upward. And yet as long as the wage does not exceed marginal productivity the employers will not lay off any workers. For the marginal workers will be adding to the product at least as much as they will receive. Under these conditions, proportionate increases in wage rates will bring with them proportionate increases in the total wage income of the working class.

It is, of course, true that if wages are pushed above marginal productivity unemployment will tend to result, and the total paid out in wages will again begin to diminish. It is undesirable that this should be done; but it should be noted that, within a given range, even such a condition may give a larger total wage income to the workers than they formerly received when

combinations of employers depressed wages below the point of marginal productivity.

In a similar fashion, the fixing of minimum wages by the Government may also raise the general level.

Effect of Competitive Raising of Wages.

Let us now turn to the case where an individual firm employs such a considerable fraction of the total available labour supply in a given market that as it hires more men it is compelled to raise the rate in order to attract them from other firms, industries, and possibly localities. In such circumstances, it will commonly be forced to increase the wage rates of those already employed in order to avoid the dissatisfaction which would develop if different rates were paid for equal units of work.

This will cause the added wage cost of hiring additional workers, or what we may call marginal wage cost, to exceed the average wage actually paid to them and their associates. This is shown by the following illustrative table.

Number of workers	Wage paid to all workers	Total wages paid	Added wage cost caused by hiring given additional worker (marginal wage cost)
(1)	(2)	(3) = (2) × (1)	(4)
100	$4.00	$400.00	
101	4.01	405.01	5.01
102	4.02	405.04	5.03
103	4.03	415.09	5.05
104	4.04	420.16	5.07

Because of the fact that the higher wages which were paid to attract additional workers had to be extended to all those previously employed, it will be seen that the added or marginal cost of such hirings, as shown in column 4, is greater than the average wages paid, or what may be known as the supply curve of labour, to that establishment as shown in column 2. It is a second consequence that if the average labour cost rises in a straight-line arithmetic function—i.e., $y = a + bx$—the marginal labour cost will rise twice as rapidly—in this instance, by

two cents for each added worker employed, while the average wage itself increases by only one cent.

We may, therefore, express this relationship by the two curves AC and MC in figure 5. The demand curve for labour in the individual establishment will slope downward, because even under perfect competition there would be decreasing physical increments though the price per unit were to remain the same. If the firm produced an appreciable fraction of the total supply, the price per unit would fall, and the additions to total revenue would, as we shall see, fall still more rapidly. Since the firm which hired an appreciable fraction of a pooled labour supply would also be certain to produce a still larger fraction of the output of a particular product, it follows that the marginal demand curve for labour in the individual establishment would fall for a double reason : (*a*) there would be diminishing increments to total product ; and (*b*) the added revenue derived from the production of the added increments would fall more rapidly than the price per unit. We shall, however, postpone a more detailed discussion of this point and merely indicate a negatively sloping demand curve for labour in the individual establishment, which is represented by DD. This measures the added revenue brought to a firm by the hiring of successive workers. Now, the most significant feature about this illustration is that it shows how the number of workers hired by the concern would be OX instead of OX_1. For production will be carried to the point where the added revenue derived from the hiring of an additional worker will be equal to the added cost entailed by such a hiring. Up to this point, workers will be hired because their labour will yield more than it costs. Beyond it, added workers will not be hired because the added cost occasioned by their labour will cost more than the labour will yield. This means that

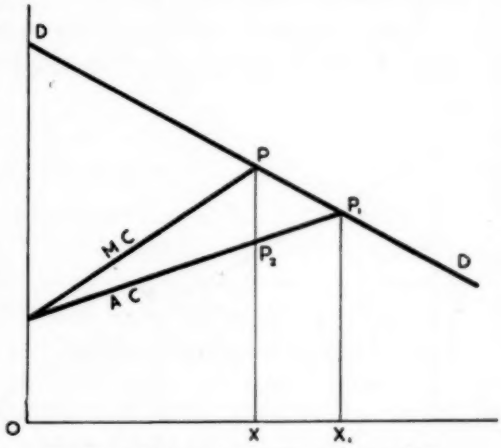

FIG. 5. — Movement of average and marginal labour costs within an enterprise under conditions of imperfect competition in the purchasing of labour.

equilibrium will be reached where the curve of marginal wage cost intersects the demand curve for labour; and this is at OX quantity of workers. It should be noted that, while the marginal cost of labour at that point is OP, the actual wage received not only by the marginal but also by all the other workers is only OP_2, or appreciably less than the marginal wage cost.

The establishment of a minimum wage by trade union or governmental action would, however, change the nature of the supply curve of labour. For then additional workers could be hired by the employer at precisely the same wage as the earlier workers received. This would be particularly the case where the union, as in so many closed shop or preferential agreements, agrees to provide the employer with an adequate supply of labour. The supply curve of labour would thus be described by a line parallel to the base and possessing infinite elasticity [1]. Under these conditions, there would be no difference between average costs and marginal costs. For these are identical under conditions of constant cost.

This is of great practical consequence, as will be seen from figure 6, which shows what would happen under varying wage scales which might be set. Thus, if the same wage were fixed as before, or $XP_2(OP_2)$, the number of workers employed would be OX_2, or XX_2 more than before.

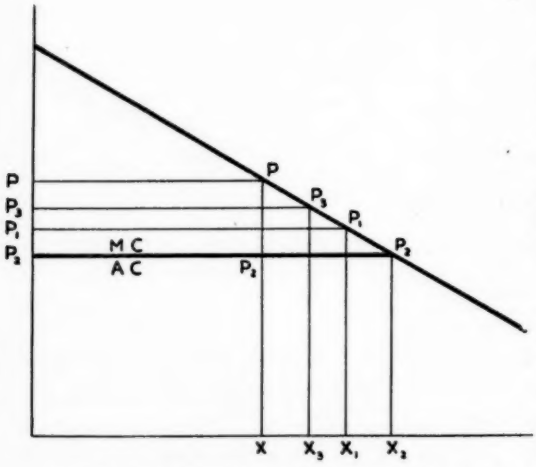

FIG. 6. — An illustration of the effect of union or governmental wage scales upon wages and employment under conditions of imperfect competition in the purchasing of labour.

Under these conditions, the same wage would result in a great increase in employment (XX_2) and, therefore, in a very appreciable increase in total wages ($XX_2P_2P_2$).

[1] The one qualification which might be made to this conclusion is where a system of individual bargaining is superimposed upon that of collective bargaining, and employers have to pay more than the union rate in order to obtain labour, and have to increase this rate to draw more and more labour in.

If the wage were fixed at the previous point of marginal cost, or XP (OP), then there would be the same number of workers employed as before, since costs at the margin would be unchanged. Each worker would, however, receive P_2P more than before; and the total increase in the wages bill would be P_2P_2PP.

A third possibility would be for the wage to be fixed at the point where the previous average cost, or labour supply curve, cut the demand schedule. This would give each worker a higher wage than before by the amount PP_1, and would lead to the employment of XX_1 more workers or units of labour. This result—namely, for wages per worker to be increased and employment to expand—would surely surprise those economists who posit their reasoning upon the assumption of perfect and pure competition.

If the wage were placed at a higher point than OP, or the point of previous marginal cost, there would of course be some decrease in employment and—because of the decrease in production—some increase in price. Nevertheless, the total amount paid out in wages might still be more than it was originally before the wage was set by collective bargaining or by governmental enactment.

The Case of Discriminatory Wage Rates.

A third case is where the employer of labour is able to practise perfect discrimination between workers—namely, where he will hire the additional workers at the respective wages which are needed to induce them to enter his employ, but will not increase the wages of those who are already employed. He will thus pay different rates for equal quantities of labour. It is true this practice is likely to arouse discontent and opposition among the working force, but if especial pains are taken to keep the individual pay slips secret it may be possible for this policy to be followed without causing serious trouble. This will mean that the labour supply curve SP shown in figure 7 will be the curve of marginal and not of average wage cost. The total amount of labour hired will be OX, and the total wage will be equal to OSPX. Now by collective bargaining or governmental action let a wage be fixed which is equal to OP, the amount received by the last worker under the example given of perfect discrimination. The supply curve of labour under the new conditions will be described by the

line PP. Since costs at the margin will not have been increased, the same amount of labour will be employed as before—namely, OX. But every worker, save the last employed, will receive a higher wage; and in the aggregate the increase will amount to SPP.

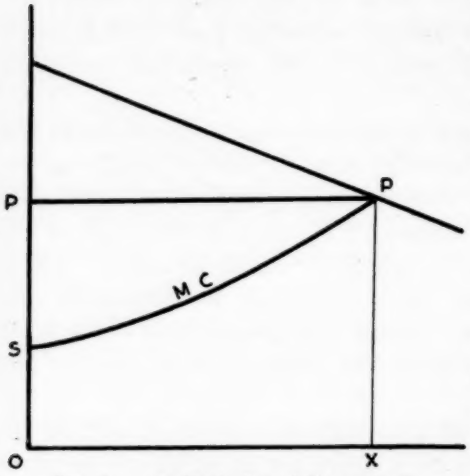

FIG. 7. — An illustration of the curve of marginal labour cost within an enterprise under (1) imperfect competition in the purchasing of labour and (2) perfect discrimination between individuals, and the effect of union or governmental wage rates.

Effects of Monopolistic Price Control.

Thus far, we have dealt with the possibilities of trade union and governmental action in increasing wages under conditions of impure and imperfect competition in the hiring of labour, or what Mrs. Robinson terms monopsony. We may pass for our fourth case to a consideration of the situation in the closely joined case of imperfect competition in the sale of commodities [1].

The theory of perfect competition, as we have stated, is based on the assumption that the number of individual producers is so great that alterations in the output of any one establishment will have no effect upon the price per unit. Thus, if a Kansas wheat grower produces 20,000 bushels instead of 10,000, the addition of 10,000 bushels is so infinitesimal in respect to the total supply that the world, or even the national, price of wheat is unaltered. Price, under these conditions, is made for the individual establishment, and not by it. Total revenue increases at the same rate as output, and marginal (or incremental) revenue per unit of output will be the same as average revenue or price. The demand curve for an individual enterprise will be represented graphically by a horizontal line parallel to the base, and possessing infinite elasticity.

Under these conditions, the individual firm will carry

[1] See also Edward CHAMBERLIN: *The Theory of Monopolistic Competition* (Cambridge, Mass., 1936).

production to the point where the added (marginal) cost of the last unit will be equal to the average revenue or price at which all units will be sold. This, as stated, will also be equal to the marginal revenue. In the long run, as Professor Viner has shown [1], a second condition will also determine output —namely, that average total unit cost, including interest on fixed investment, etc., will also equal unit price or average revenue [2].

Under imperfect competition, however, the output of an individual establishment does form such an appreciable fraction of the total supply that an increase in it is a distinctly noticeable addition to the total quantity sold. This will cause unit price or average revenue to fall. But—and this is the crux of the argument—this fall in price (or average revenue) will cause the increments of total revenue (or marginal revenue) to fall at a more rapid rate. For the fall in unit price consequent upon an increase in output causes the price of all of the preceding units, and not merely of the added units, to fall. This can be made clear by another numerical illustration, in which it is assumed that the elasticity of the price curve for an individual establishment is —4.0 (that is, an increase of 1 per cent. in its output causes price to fall by ¼ of 1 per cent.). If a firm produces 100 units which sell for $100 each, its total revenue will be $10,000. If it expands its output to 101, then the unit price—under the assumption made above—will fall to $99.75, and the total revenue will then be $10,074.75 ($99.75 × 101). The addition to total revenue (or marginal revenue) will be $74.75, which is $25 less than the average revenue or price of $99.75. If output is increased by a further unit to 102, then unit price will fall virtually by another 25 cents to $99.50, and total revenue will rise only to $10,149 ($99.50 × 102). The addition to total revenue will be $74.25 ($10,149.0—$10,074.75); as unit price or average revenue falls by 25 cents, marginal revenue falls by 50 cents, or twice as much. The marginal revenue curve is, therefore, below the average revenue curve, and this is illustrated in figure 8. [3]

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[1] Jacob VINER: "Cost Curves and Supply Curves", in *Zeitschrift für Nationalökonomie*, Vol. III (Vienna, 1932), pp. 23-46.

[2] This will be where marginal direct cost will be equal to the average total unit cost curve. This will be at the lowest point on the latter curve.

[3] Where the AR, or price curve to the individual establishment, can be described by a straight line on an arithmetic scale—i.e., AR = $a + bx$—the marginal revenue (MR) curve will fall twice as fast. For proof, see Joan ROBINSON: *op. cit.*, p. 30.

Under these conditions, production will not be carried to the point where marginal cost equals average revenue, but, since firms will not want to produce beyond the point where added income and outlay balance, to the point instead where it equals marginal revenue. If they produced beyond this point, they would be diminishing their net profits. The managers of business will make as profits, not only upon the last unit produced but also upon all others as well, the difference between marginal revenue and average revenue, and these will constitute monopoly gains. [1]

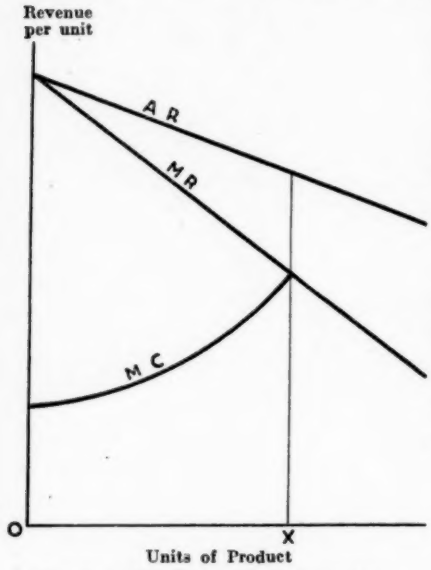

FIG. 8. — Monopoly gains arising under conditions of imperfect competition.

Labour will receive as a producers' wage the amount which the last worker adds to the product, which will be the marginal physical product multiplied by the marginal revenue (MR). But as consumers they will pay for the goods the average revenue (AR). Hence they will suffer an exploitation to the extent of the difference between AR and MR. [2]

It is urged by some that in such circumstances trade unionism and governmental wage fixing can reduce the amount of exploitation which results from imperfect competition, and that the case for governmental action is established.

The opponent of governmental wage regulation, even while admitting the reality of imperfect competition in certain lines, will, however, interpose three objections to this conclusion.

(1) If labour is exploited by the difference between marginal revenue and price, capital is equally exploited, since the same

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[1] In addition, they may make gains arising from the monopsonistic purchasing of the factors of production.

[2] The ratio of marginal revenue to price or average revenue will be $\frac{h-1}{h}$ where h = the elasticity of the price curve for the individual concern. Where this is –10.0, MR will be nine-tenths of AR, and the monopoly profits will amount to one-tenth of the price.

principle applies there as well, and therefore labour is not the sole victim of discrimination. This defence, however, overlooks the fact that the enterprisers who are presumed to pocket the difference between average revenue and marginal revenue are themselves the stockholders or the managers, or both. These groups are not distinct from the capitalistic class, but are a part of it. While it may be true that the class of rentiers may, because of such forces, receive less than they would otherwise, the more active capitalists will receive not only this residue, but also the deductions from the true marginal productivity of labour.

(2) It will also be contended that, while it is possible to have imperfect competition in a few industries, nevertheless when this becomes more universalised forces are set in motion which make the continuance of any such condition virtually impossible. Under imperfect competition, as we have seen, production within an enterprise will be carried to the point where marginal costs are equal to marginal revenue, not to where they equal average revenue. Since the marginal cost curve is normally a rising one, this means that equilibrium for the enterprise will be reached earlier and at a lower output than under perfect competition. But this means, in turn, that less labour and capital than otherwise will be used. The surplus labour and capital will be squeezed into other fields, but as these fields are also brought into a more imperfect state of competition the no-man's-land in which labour and capital may find refuge more and more contracts. Such has been the experience in recent years of those who believe in freedom. Either the refugees from economic monopoly must stay in these overcrowded fields, where they have to content themselves with a far lower marginal return than prevails elsewhere, or they will combine and try to break into the imperfectly competitive fields and help to restore competition there. In this latter case, they will greatly reduce, and perhaps eliminate, the monopoly gains which were formerly obtained from the exploitation of the factors of production.

In appraising this contention, it may be granted that there will be some such tendency ; but that it can go far enough to re-establish a state of perfect competition seems impossible. In order to do so, the size of the productive units would have to decrease so that each enterprise would produce only an infinitesimal fraction of the output of a given industry. Any

such development is highly unlikely, and as long as the output of given firms does comprise an appreciable portion of total supply there will be a discrepancy between marginal and average revenue; and to this extent there will be an "exploitation" of labour. Where financial institutions do not want to build up new concerns to threaten the profits of those already in the field, it is virtually impossible for the unemployed men to get industrial employment. They are instead forced into lines such as peddling, etc., where almost no capital is needed, and where returns are very small.

(3) The third objection is that, even if imperfect competition continues, an increase in wages will restrict production and cause unemployment under it just as much as it would under perfect competition. An increase in wages, unless accompanied by an increase in efficiency, would mean increasing the cost of producing successive units, and hence would raise the whole marginal cost curve. This will mean that the marginal cost curve (figure 8) will cut the marginal revenue curve (MR) at a higher point where the total output will necessarily be smaller than it was before the wage increase was granted. This smaller output will mean less employment, and consequently a displacement of labour. It is therefore urged that, whatever may be the evils of imperfect competition and quasi-monopoly, an increase in wages is not the way either to cure these evils or to restore balance.

This is certainly an important point. But, while it is true that some unemployment would be caused by such an increase in wages, the extent of this unemployment would not be as great as it would be under conditions of perfect competition. Since the marginal revenue curve is negatively inclined, an upward shifting of the cost curve would cause the new intersection to differ from the former by less than would be the case were the marginal revenue curve and the average revenue curve to be identical and horizontal to the base, as they would be under conditions of perfect competition. Whether in these circumstances the increase in money wages per worker of those who continued to be employed would form a larger aggregate than the amount lost through unemployment would depend largely upon the relative elasticity of the marginal revenue curve. The steeper its slope, and consequently the less elastic it is, the greater the possibility for an increase in total money wages. But in this connection it should also be remem-

bered that the prices of the commodities will be higher, and hence will help to offset any such money gain as may develop.

A more hopeful way of recovering the monopoly profits which are thus taken from labour would be for the Government to levy a heavy tax upon such excess profits, and to use the proceeds for either or both of the two following purposes: (*a*) to provide social services such as health, recreation, old-age pensions, sickness and unemployment benefits, etc.; (*b*) to provide children's allowances, so that those with children to support could give them more adequate maintenance and care than is possible when a flat wage is fixed for all workers regardless of the number of their dependants.

But advocates of a policy of progressive taxation, who are often at the same time opposed to trade unionism and collective bargaining as violations of economic laissez-faire, are almost like those who try to make bricks without clay. For any such move towards progressive taxation will be bitterly opposed by those who control large-scale industry, and by the wealthy classes in general. It can probably be carried through only by the political organisation of the manual workers, farming groups, and white-collar workers. So far as the cities and towns are concerned, such political organisation is almost impossible to effect unless it is based upon economic organisation, which means trade unionism.

Men, I believe, must in general first be organised economically before they can effectively be organised politically. For economic organisation frees them from the fear of being discharged for their political opinions and gives them the advantages of pooled funds and a common organisational structure. If further corroboration on this point is needed, we may turn to the examples in the United States of Minnesota, Wisconsin, and New York, where political movements have succeeded because they were based on strong trade union organisation. This is not to say that trade unions should be the exclusive foundation for a progressive movement which would aim at appropriating for society the difference between marginal and average revenue. In fact, I do not believe they should be. On the contrary, the farmers, white-collar workers, and professionals, would also have much to gain from any such programme of taxation, and should by all means join in supporting it. But the trade unions will be a decisive factor.

To crush trade unionism, therefore, as so many advocates of atomistic competition urge, would be to abolish one of the most effective instruments which may be used to tax monopoly profits. I may also add that in certain cases it may be better to socialise industries which closely approach a state of monopoly. For in so doing, since the aim of such a socialised agency would not be to maximise profits, production could be carried to the point where average cost (including interest) equalled price, or at the very least marginal revenue. This would at once expand production, increase employment, and lower prices. But this, as Kipling used to remark, is another story, and one which I shall not discuss further at this time.

The Theory of Purchasing Power

The discussion thus far has been conducted upon the assumption that any general increase in wages would not be accompanied by an allied increase in the quantity of monetary purchasing power whether created directly by the Government or by the banking system. It is upon this very point, however, that the advocates of the so-called "purchasing power theory", which was widely followed in the United States during at least the early days of the Roosevelt administration, base their case. They argue that if wages are forced upward by reason of trade union or governmental action the banks will then be forced to grant more credit to business, and that certain enterprises will also draw on reserves which otherwise would be idle. More monetary purchasing power will therefore be paid to the workers, who with this money in their pockets will buy more goods. To produce these added goods, more workers will be needed, and as these are restored to work they also will buy more, and so on. An increase in wages and a building up of mass monetary purchasing power is thus recommended as a method of starting the cumulative process of revival and of the progressive re-employment of those out of work.

It should, of course, be noted that this argument confines itself to the condition where there is appreciably less than full employment and where the existing volume of unemployment is not caused by wages in excess of marginal productivity. It obviously would not apply to a condition of full employment, where there would be no more slack in the economic system which could be taken up. The theory also assumes that a com-

mensurate increase in the quantity of active bank credit or total monetary purchasing power will follow inevitably from the increase in the wage per worker. Under the private banking system, however, this need not be the case, as the experience in the United States under the National Recovery Administration well demonstrated. The bankers may indeed be so frightened by the belief that the increase in hourly wages will reduce the profitability of industry that they will either not expand credit or actually reduce it. In these circumstances, there will be no net increase in the total wages paid out, and the assumed initiating cause will not operate. At the very least, the supporters of the purchasing power theory need to devise a plan which will make it certain that the increased loans or grants are actually extended. The only way to effect this with complete certainty would seem to be for the Government either to underwrite any increase in loans which would thus be needed or directly or indirectly to lend or advance the purchasing power itself.

Even if this condition could be met, however, it is evident that the advocates of the purchasing power theory have not sufficiently considered the fact that costs will be increased by the same absolute amount as wages. Not only will total costs rise by an equal amount, but marginal costs (which are almost exclusively labour costs) will necessarily rise in the same proportion as purchasing power is increased. This would seem indisputable as at least a short-time result. It is therefore argued by the opponents of the theory that the increase in money wages will in such cases precisely be cancelled by the increase in prices, so that there will be no gain in real wages. The same result, it is said, will also follow from the fact that people with more money in their pockets will bid up the prices of existing goods to a proportionately higher level.

Two forces may, however, operate to mitigate these tendencies. (1) The increased sums of money which are distributed in wages may be expended on goods which have been produced in the past and the prices of which have not correspondingly been marked up because of the greater money demand. If such is the case, then there will be a greater volume of sales which will reduce the stocks of goods in the hands of retailers and wholesalers and lead to an increased rate of orders for replacement. (2) If factory and distributive fixed costs had previously been charged to the sale price of products, the increased volume

of production and of sales would reduce the average fixed costs per unit. This would at least help to offset the increase in average labour costs and might indeed completely do so. In this way, it could be contended that costs need not rise in the same proportion as purchasing power; and that in consequence the increase in wages would be real and not nominal.

The opponents of the theory will rejoin to all this that the marginal cost at least will be increased by the percentage advance in hourly rates, and that it is marginal cost which in the short run is price determining. This would certainly be the case if business men kept their books as the economists draw their charts. But in practice it is quite probable that business men generally think in terms of average cost. To the degree to which they do so and load the price of the product during periods of slack employment with the cost of idle overhead, it is true that the purchasing power theory may, indeed, have a considerable degree of truth in it. In so far, moreover, as the rentier class with fixed money incomes suffers a reduction in real income because of the rise in prices, the wage earners would also gain from such an increase in money prices. For the reasons stated, however, such gains are likely to be far less than the proponents of the plan originally believed [1].

Many of those who oppose the purchasing power theory on the grounds which have just been stated are also advocates of general wage cuts as a method of reducing unemployment and of restoring full employment. The advocates of this theory reason that the supply of monetary purchasing power will remain unimpaired, and that consequently the money demand for goods will be the same as before. Under these conditions, they argue that a reduction in wages would restore or increase the margin of profits and encourage business men to produce more, and hence to hire more workers.

Mr. J. M. Keynes, however, believes that a general decrease in wage rates is much more likely to cause business to borrow and banks to lend that much less purchasing power. Costs will be lower, and less credit, he believes, will be needed to finance business. It is, indeed, much easier for the banking system in times of stress to reduce than to expand loans. But such a decrease would mean a virtually corresponding reduction in

[1] For a very interesting confirmation of this, see the able article by M. KALECKI: "The Lesson of the Blum Experiment", in *Economic Journal*, March 1938, Vol. 48, pp. 26-41.

the amount of monetary purchasing power distributed to consumers, and a parallel reduction in the prices of the goods. Prices, according to Mr. Keynes, would be reduced approximately in the same ratio as marginal costs, so that profits would be no greater than before and there would be no inducement for business to expand output or hire more workers [1]. The rentier class would, indeed, tend to get a larger share of an unincreased national income because of the fact that prices would have fallen while their money incomes remained unaltered.

Diagrammatically, Mr. Keynes's argument is illustrated by figure 9. Here DD represents the original demand curve for a typical commodity, and SS_1 the curve of marginal costs. The original equilibrium will be at the point of intersection of these two curves, which would mean that the unit price would be XS_1, and the quantity produced and sold OX. If wages are reduced by S_1S_4, then the new marginal cost curve (which is virtually identical with the curve of marginal labour costs) would be shown by $S_2S_4S_3$. But this lowering of unit costs, declares Mr. Keynes, causes bank credit to be diminished correspondingly, so that the money demand curve for commodities decreases by the same amount and proportion —namely, by S_1S_4—and is now represented by D_1D_1. This will now intersect the new marginal cost curve at S_4, and this means that the total quantity produced will be the same as before—

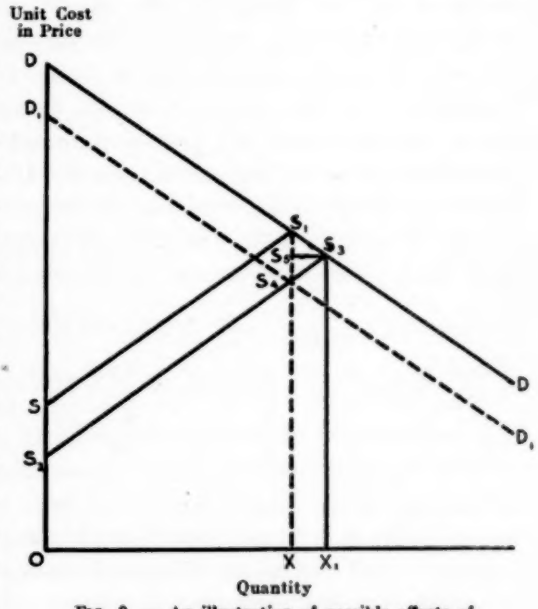

FIG. 9. — An illustration of possible effects of a general decrease in wages upon total production.

[1] See J. M. KEYNES : *The General Theory of Employment, Interest and Money* (London, 1936, pp. 257-71 ; Joan ROBINSON : *Introduction to the Theory of Employment* (London, 1937), pp. 50-51.

namely, OX. Under these conditions, national income will not be increased.

But all this is conditional upon the assumption that the money demand curve will shift to the left by precisely the same amount and proportion by which the marginal cost curve has moved downward and to the right. The reasoning behind this seems to be of a doubtful nature : (1) the reduction in costs will cause banks to reduce the amount of their loans by the same proportion ; and (2) competition between producers will cause prices to be lowered commensurately with costs. This in turn is said to result in the reduction of loans which has already been assumed and to reinforce this assumption.

In fact, however, these conclusions are at best dubious and may be at times actually erroneous. It is quite possible, for example, that the banks may not diminish the total of their loans. In that case, the money demand curve for commodities would continue to be represented by DD. Under these conditions the point of intersection of the new marginal cost curve would be at S_3. This would mean a total product of OX_1, or XX_1 more than before, and the national income would increase by the ratio of $\frac{XX_1}{OX}$. Prices would indeed fall, but by the ratio of $\frac{S_1S_5}{XS_1}$ rather than by that of $\frac{S_1S_4}{XS_1}$, and this would be true under the assumptions of perfect competition.

The same conclusion also follows from the quantity theory of money. If the total quantity of effective monetary purchasing power (which is almost exclusively derived from bank credit) remains unaltered while marginal costs and prices are reduced, it is obvious that the actual volume of goods purchased and produced will be greater.

Incidentally, it is difficult to reconcile this conclusion with the Keynesian contention that revival in such circumstances can take place only through the falling of the interest rate. For with the increase in the national income the total return on the same total amount of capital will naturally be greater and this will mean that the marginal productivity of capital will be higher. This would naturally mean in itself a higher interest rate. It is, of course, quite probable that as business conditions improved (which the Keynesians do not believe would follow from a reduction in money wages) the preference for cash, or the rate of liquidity preference, would diminish. If this rate had

previously been above the rate of marginal productivity and hence had shut off investment, the dual movement would tend to restore equilibrium and lead to an increase in investment. (If, for example, average liquidity preference had been at 6 and marginal productivity at 2 per cent., then investment would have greatly decreased. If marginal productivity rises to 4 points and liquidity preference falls to 4 per cent., then investment will increase.) But in this case the rise of marginal productivity would have played its part as well as the fall in liquidity preference, and the increase in real national income resulting from the fall in wage rates would have been the causative factor for other developments.

If the rate of liquidity preference and of marginal productivity had previously been equal at, say, 2 per cent. or at an intersecting point of 4 per cent., then an increase in marginal productivity would cause a rise in the rate of interest and would lead to a greatly increased flow of investment which, under the doctrine of the multiplier, would still further increase the national income. The upward movement in this case would be accompanied and in its later phases caused by an increase and not by a decrease in the interest rate.

Mr. Keynes's contentions on this point cannot, therefore, be accepted implicitly, and it is clear that the decisive factor is whether or not bank credit would in fact decrease proportionately with the reduction of marginal cost at the X point of output. Mr. Keynes assumes that it would, but proof on this point is lacking, and it is virtually as reasonable to assume the contrary. The whole issue must therefore be regarded as one to which a definite answer cannot be given at this time, and one in which different results may occur at different times and in varying circumstances.

REPORTS AND ENQUIRIES

Hours of Work in Germany

The Statutory Provisions

Present Regulations

Hours of work in Germany are at present governed by the Hours of Work Code (*Arbeitszeitordnung*) of 30 April 1938, which came into force on 1 January 1939 and takes the place of the Code issued on 26 July 1934. This measure applies to workers over 18 years of age employed in establishments or administrations of all sorts, even if not carried on for the purpose of profit. The following are, however, excluded : agriculture, forestry, hunting, stock-raising; establishments of an industrial character subsidiary to agriculture or forestry ; maritime and aerial navigation, and fishery. Persons in managerial or confidential positions and employees of pharmacies are also excluded.

Young persons of 14-18 years of age are covered by the provisions of the Youth Protection Act of 30 April 1938. Special Acts govern employment in bakers' and pastrycooks' establishments and in hospitals, etc.

The German scheme is distinguished by the importance which is attached to collective rules. Historically these may be regarded as a continuation of the old collective agreements—indeed, in many cases they have directly replaced part of or all the provisions of the latter. Nevertheless, from a legal point of view, the collective rules are public administrative regulations, similar to Decrees or Ministerial Orders. They are issued by the labour trustees after consultation of expert committees. Regulation by collective rules has very greatly developed since 1934 ; several thousand sets of rules have been issued, many of them containing provisions relating to hours of work.

In these circumstances the regulations governing hours of work are not as uniform as in most other countries. The supreme authorities have indeed repeatedly emphasised that the scheme must be flexible, so that it may be adapted to changing economic conditions. This flexibility is secured not only by the method of collective rules but also by the provision of exceptions under the Code itself.

The Hours of Work Code and all the collective rules are based on the principle of the 8-hour day, excluding breaks. Greater flexibility is obtained first of all by the possibility of distributing hours unevenly

over the different days of the week. At present this spreadover may apply to a period of three weeks ; a " triple week " of 144 working hours has thus been introduced—that is, a 48-hour week calculated by average over three consecutive weeks.

Secondly, the Code authorises the making up, during a period of five consecutive weeks, of working time lost owing to local holidays, public demonstrations, etc., or owing to half-days off preceding Sundays or public holidays.

The spreadover and making up of lost time are not permitted to result, together, in the extension of hours of work beyond 10 in the day, save by authorisation of the factory inspector. An extension of not more than two hours in the day (up to 10 hours in all) is allowed for work of preparation or termination ; work in excess of the 10-hour daily limit is permitted in exceptional cases.

Apart from these extensions, the Code provides for :

(*a*) The possibility of having two additional hours a day worked by each worker on 30 days in the year, provided a daily total of 10 hours is not exceeded ;

(*b*) The possibility of extending hours of work by collective rules up to a maximum of 10 in the day ; when the work includes a considerable amount of mere presence on duty the daily total may exceed 10 hours ;

(*c*) Extension of normal hours of work, by authorisation of the factory inspector, for a specified period ; the inspector may authorise work in excess of 10 hours a day only if it regularly and to a considerable extent includes periods of mere presence on duty or if the extension is required for urgent reasons of public interest.

Lastly, overtime is authorised in urgent cases (accidents, *force majeure*, etc.) or in order to prevent serious economic loss.

The result of all these provisions is that the maximum for hours of work, when the normal day is exceeded, stands at 10 hours, apart from the special arrangements indicated above and relating to the unequal distribution of hours, the making up of lost time, work of preparation and termination, periods of mere presence on duty, urgent cases of public interest, accidents, *force majeure*, and the avoidance of serious economic loss.

Other provisions of the Code govern continuous operations, breaks, the daily rest, and overtime pay. Overtime carrying with it the right to an increased rate of payment is defined as hours in excess of the normal, worked in the following cases : on the 30 days in the year provided for in the Code ; in case of extension by collective rules (except work including long periods of mere presence on duty) or authorised by the factory inspector ; and lastly in case of extraordinary circumstances. The right to an increased rate of payment is subject to exceptions—namely, when the additional time worked would also be permissible under the provision relating to work of preparation and termination, and when the extension is due solely to the operation of natural causes, accidents, etc. In the absence of provisions to the contrary based on decisions of the authorities or on agreement between

the parties, the Code provides for an overtime rate of time and a quarter ; in seasonal industries the increased rate need not be paid if the extra hours are balanced by a reduction of working time during the off season.

The Code also contains provisions strengthening the protection accorded and limiting extensions of work for women. The Youth Protection Act contains still stricter provisions. The hours of work of women and young persons may in no case exceed 10 in the day.

The grant of holidays with pay is not required by law, except to young persons under 18 years of age. The Youth Protection Act fixes the minimum length of the annual holiday at 15 days for young persons under 16 and 12 days for those over 16. This is increased to 18 days for young persons who take part for not less than ten days in Hitler Youth camps or excursions.

Adult workers receive annual holidays with pay under collective rules. The practice of allowing paid holidays has spread considerably in recent years ; the extension has taken the form of the grant of holidays to classes of workers who used not to receive them, a reduction in the period of service which qualifies for a holiday, and an increase in the length of the holiday. About 90 per cent. of the collective rules in force in 1937 fixed the minimum holiday at 6 working days a year. The maximum is usually 12 days.

Innovations in the Present Regulations

Between 1929 and 1938 the German regulations concerning hours of work were amended on two occasions. The Order of 26 July 1934 made no change of substance and was rather a consolidation of existing legislation than a new scheme. On the other hand the Hours of Work Code of 30 April 1938, described above, has introduced a number of important changes. These may be summarised as follows.

(1) The fundamental innovation is the establishment of a special scheme for young persons ; these had hitherto been subject to the general regulations, which, however, contained a section consisting of special protective measures for young persons (respecting hours of work at dangerous operations, prohibition of certain work, maximum hours, home work, prohibition of employment at night, breaks, daily rest, and overtime).

(2) There is now a second set of provisions under which the general scheme applying to adults is rendered more flexible. The additionai flexibility is secured more particularly in the following ways :

(*a*) Hours of work may be spread over a period of three weeks, instead of a fortnight as was the case before 1939.

(*b*) The Code of 30 April 1938 introduces the making up of lost hours of work, a proceeding hitherto unknown.

(*c*) The extension of hours beyond the maximum of 10 in the day has been facilitated in the different cases for which the new regulations provide. The authority competent to approve or authorise such extensions is now, in all cases, the factory inspector ; formerly certain powers in this respect were left to the principal State and Federal authorities.

Under the old law the extension was authorised only " in exceptional cases, for unquestionable reasons of public interest " ; now " urgent need " is sufficient.

(*d*) Lastly, the rule concerning increased payment for overtime has been rendered more flexible by the introduction of a provision to the effect that the increased rate is not due when the additional time would have been permissible under the provisions concerning work of preparation and termination.

Economic Conditions and the Employment Market

Actual hours of work are determined by two principal factors —the maximum imposed by law and that imposed by the economic situation of the country. The latter factor decides the extent to which available equipment and labour can be used. The level of hours actually worked thus becomes one of the indices of the economic situation, parallel with those more generally used—namely, production and employment. Before the movement of actual hours of work in Germany is analysed, it should be placed in its proper relation to the other indices of economic conditions.

The years examined here (1929-1938) include two periods of great activity (1929 and 1937-38) and a period of low activity (1932). The following table shows how production, employment, and unemployment, have moved during these ten years.

INDICES OF PRODUCTION, EMPLOYMENT AND UNEMPLOYMENT [1]

(Base : 1929 = 100)

Date	Industrial production [2]	Employment		Registered unemployed
		Sickness insurance statistics [3]	Statistics of establishments (industry and mining)	
1929	100.0	100.0	100.0	100.0
1932	53.3	71.1	59.5	303.0
1937	117.2	104.3	110.0	46.0
1938 (Jan.-Sept.)	124.2 [4]	110.5	116.8	23.0

[1] Including the Saar Territory since 1937.
[2] Excluding the food, drink and tobacco industries.
[3] Agriculture, mines, industry, transport, commerce, and administration.
[4] Including Austria since mid-March 1938.

If a comparison is made of the data concerning production and employment respectively, an analogy between the movements of the two index numbers is found. Both production and employment reached their minimum in 1932, and in 1937 and 1938 they exceeded the high mark of 1929. The high and low points of the employment curve remain somewhat inside the limits reached by that indicating produc-

tion. This may be explained by recourse to short time during depression years and to overtime in periods of boom—policies which slow up the movements towards dismissals and re-engagements respectively characterising these two phases of the business cycle.

The curve representing unemployment obviously moves in a direction opposed to that of the production and employment curves. For various reasons the unemployment index figure in Germany has been affected by other factors than the movement of production. These factors caused between 1929 and 1932 an increase in unemployment more than proportionate to the decrease in production, and between 1932 and 1938 a decrease in unemployment far exceeding the increase in production and employment.

The Hours Actually Worked

Sources of Information

The *Institut für Konjunkturforschung* publishes monthly statistical notes on the hours actually worked in industry and mining [1]; they are the only general data concerning actual hours of work. Apart from these, fragmentary data are to be found in the reports of the factory inspectors, published every two years [2]; these describe the tendency regarding hours of work of manual and non-manual workers during the periods covered, and give as instances information on the actual hours of work in force in different industries or trades.

Methods of Compiling Statistics

The material concerning hours actually worked in Germany comes from the monthly statistical reports sent in by industrial and mining establishments. These give the total number of hours worked in each establishment and the average number of workers employed. A division of the former figure by the latter, and of the quotient by the number of working days in the month in question, gives the average daily hours actually worked by each worker. These figures are published as the " average daily hours of workers ", for the whole of industry, for all production-goods industries together, for all consumption-goods industries together, and for the 13 principal industries separately.

Formerly another statistical series was published. Using figures provided by the trade unions (and later by the German Labour Front), this series classified the workers in percentage groups according to their hours of work (under 48, 48, etc.). The series was stopped, however, in October 1934, and it is useless to reproduce here the data for 1929 and 1932, since the corresponding figures for 1937 and 1938 are not available.

In interpreting the figures for average daily hours of work, the following qualification should be borne in mind.

The average hours are obtained by dividing the total number of hours worked during the month by the average number of workers

[1] *Wochenberichte des Instituts für Konjunkturforschung* and *Konjunkturstatistisches Handbuch* (1936).

[2] *Jahresberichte der Gewerbeaufsichtsbeamten und Bergbehörden* (1929, 1931-32, and 1935-36).

employed in the course of the month. The latter figure includes persons who did not actually work during the whole period, either owing to short time due to economic reasons (difficulty in marketing or lack of raw materials) or owing to sickness or holidays. At a time of economic prosperity, short time has a tendency to disappear, but absences due to sickness and holidays remain. They constitute a factor permanently reducing average hours of work; for the aggregate of hours worked is divided by a figure which includes not only persons who really worked throughout, but also some who were absent by reason of sickness or holiday during a part of the period covered. The increase in the divisor proportionately reduces the size of the quotient and to some extent falsifies the figures for " actual " hours of work. For this reason, even in times of great economic expansion, the average hours are very seldom as long as the " normal hours ", although the number of workers doing overtime probably much exceeds that of workers on short time.

Since absences due to sickness or holidays give a factor independent of economic conditions and therefore relatively stable, it should theoretically be possible to eliminate their effect by applying to the statistical raw material coefficients calculated in accordance with records of the annual number of days lost through sickness or holidays. But statistical information sufficiently exact to permit such a calculation is not available, and it therefore seems preferable not to attempt any estimate. Nevertheless, qualification must be borne in mind in analysing and interpreting the data reproduced below [1].

Statistics

The following figures, taken from the reports of the factory inspectors, show the number of establishments subject to supervision by the inspectors and the number of workers employed therein (including industry, commerce and offices, and transport).

Date	Number of establishments	Number of workers employed
1929	701,699	11,401,866
1932	647,844	7,408,961
1936	711,023	11,245,549

These figures relate to a number of establishments and of workers approximately corresponding to the scope of the regulations concerning hours of work.

[1] It may however be pointed out for purposes of information that according to the statistics of the Sickness Funds for 1936 the number of days of incapacity through sickness or accident amounted to 8.8 per insured person per year. Secondly, the minimum length of the annual holiday is generally fixed at 6 working days. An aggregate of some 15 working days out of the annual total of about 300 is thus obtained. This figure (15) is equal to 5 per cent. of the total, or—as a fraction of daily hours of work—some 24 minutes in each 8 hours. It is true that workers affected by sickness involving prolonged absences do not as a rule continue to figure on the lists of " workers employed ". On the other hand, annual holidays in excess of 6 days and occasional absences are not included in the above calculation, and these factors may wholly or partly balance the effect of long spells of sickness.

The statistics below concern the hours of work, not of the persons covered by the regulations, but exclusively of workers employed in industrial establishments. There are no similar figures for the other groups of workers.

HOURS ACTUALLY WORKED PER WORKER PER DAY

Date	All industries	Production-goods industries	Consumption-goods industries
1929	7.67	7.72	7.61
1932	6.91	6.86	6.97
1937	7.68	7.87	7.42
1938 (Jan.-Sept.)	7.69	7.92	7.40

These inclusive figures alone enable a number of conclusions to be drawn concerning the movement of hours of work in Germany during the last ten years.

For all industries together, hours of work, having fallen sharply during the period of economic depression (1932), reached in 1937 and 1938 almost exactly the same level as in 1929.

A comparison of the figures for production-goods industries on the one hand and consumption-goods industries on the other shows that hours of work have moved differently in these two main industrial sectors. In the former, the average in 1937 and in 1938 is above that for 1929. During the depression period, it fell well below the general average, and subsequently resumed an upward movement which took it well above the 1929 level. In 1938 the hours worked in this sector of industry were one-fifth of an hour, or 12 minutes a day, longer than in 1929 ; compared with 1932 the increase is over an hour a day.

In the consumption-goods industries, the fall in hours of work during the depression was much less pronounced, and likewise the recovery which followed ; and hours of work have never returned to the 1929 level. The difference, as compared with 1929, was 6 minutes a day in 1937 and 12 minutes a day in 1938 ; hours were thus decreasing in 1938.

The difference between hours of work in the production-goods and the consumption-goods industries was half an hour a day (three hours a week) in 1938, as against 20 minutes in 1937 and about 6 minutes in 1929. In 1932, a year of profound economic depression, the consumption-goods industries worked about 6 minutes a day longer than the production-goods industries.

These findings agree with what is known from other sources concerning the general tendency in the different branches of industrial activity during periods of business depression and boom. Economic fluctuations in both directions are much more accentuated in produc-

tion-goods industries—and particularly in those producing what are known as investment goods—than in industries producing for consumption. This general tendency has been strengthened in Germany by the execution of the Four-Year Plan and more particularly of the rearmament programme, as well as by the shortage of certain imported raw materials required for the manufacture of consumption goods (cotton, wool, hides, etc.).

The following tables show still more clearly the characteristic features of German economic development. They concern four different industries, two of which turn out production goods and two consumption goods.

HOURS WORKED PER WORKER PER DAY IN FOUR INDUSTRIES

(Annual averages)

Date	Production-goods industries		Consumption-goods industries	
	Engineering construction	Building materials	Textiles	Clothing
1929	8.02	7.62	7.46	7.63
1932	6.58	6.87	6.83	7.10
1937	8.31	7.94	7.18	7.25
1938 (Jan.-Sept.)	8.34	7.98	7.26	7.30

The following table shows the highest monthly figures recorded in certain industries in 1937 and 1938 :

Industry	Hours per worker per day	
	1937	1938
Engineering construction	8.45	8.39
Building materials	8.28	8.22
Chemical industry	8.22	7.84
Production of iron and metals	8.09	8.05

The lowest figures were reached in the following industries :

Industry	Hours per worker per day	
	1937	1938
Clothing	6.61	6.58
Textiles	6.70	6.86
Drink and tobacco	7.23	7.29
Food	7.33	7.23

These tables bring out the considerable span between the maximum and minimum hours registered in different industries. The difference between the maximum reached in the engineering construction industry and the minimum reached in the clothing industry is almost two

hours a day. It is true that the clothing and textile industries are subject to pronounced seasonal fluctuations; nevertheless, even the annual averages, which eliminate these fluctuations, show a difference of about an hour as compared with the engineering construction industry.

Application of the Regulations

The above analysis of the regulations governing hours of work brings out the flexibility of the relevant provisions—a quality still further heightened by the operation of amendments introduced under the Code of 30 April 1938, which came into force on 1 January 1939. Some of these amendments confirm a state of affairs already existing before 1938, the principal feature of which was a very wide use in certain industries of the exceptions permitted either under collective rules or through licences from the factory inspectors. This policy has been described as follows by the German Minister of Labour:

As in many cases to-day the necessary labour is not available for the execution of work of great national importance, the only course left is to extend the hours of work of the available workers. Such an extension of hours can, of course, only be authorised when it will actually serve to expand production. It is not true that, as is asserted in many quarters abroad, the German Government has decided to suspend entirely all measures for the protection of the workers, including hours of work provisions, and that the employers are now free to fix hours of work arbitrarily, In reality, the statutory provisions still exist unchanged, but the authorities responsible for their enforcement have simply been instructed to avoid applying them too strictly and to take advantage of the facilities provided by law for extending hours of work when a shortage of labour makes this absolutely necessary. The Hours of Work Code provides for a series of exceptions, thanks to which the increased demands can be met without neglecting the necessary considerations of protection for the worker. Extensions of hours of work in all the most important cases are regulated by the collective rules issued by the labour trustees, or require the authorisation of the factory inspectors. These safeguards ensure that no undue demands shall be made on the worker and that authorisations shall be granted only in especially urgent cases. Where permission is granted to work longer hours, this must not of course lead to the dismissal of other members of the staff, since the sole purpose of the measure is to secure an expansion of production by increased effort. Accordingly, an extension of hours of work can only be considered in trades in which there is a shortage of suitable labour and in which it is necessary to expand production for national reasons. This is the case in the production of raw materials, and also more especially in the iron and other metal industries, building and allied trades, and to some extent in the chemical, wood and foodstuff industries [1].

One further indication of the extent to which recourse has been had to longer hours in Germany may be found in the fact that in the production-goods industries, " where the demand for longer working hours is greatest, daily working time is already at the greatest maximum possible under present conditions. Working time could only be

[1] F. SELDTE: *Sozialpolitik im Dritten Reich* (Berlin, 1938), p. 20.

lengthened in a few consumption-goods industries. But here an increase of employment is limited by raw-material difficulties." [1]

The reports of the factory inspectors contain many references to the extension of hours of work. The last reports published relate to the years 1935 and 1936. Information supplementing the statistical data given above has been extracted from these documents.

The report for Prussia states in a general way that the authorisation given to inspectors to allow 2 hours' overtime a day on 30 days in the year proved insufficient in most cases. In the face of the shortage of skilled labour, the provisions concerning extensions in exceptional cases therefore had to be used to an extent hitherto unknown. In building work for the public authorities, the skilled workers and supervisory staff were often organised in two 12-hour shifts, the other workers being divided into three shifts. Certain operations even necessitated a daily working time of 15 or 16 hours. In most districts the brick works were on a week of 54 or 60 hours. The collective rules for brick works throughout Germany authorised the making up of overtime by means of additional rest during an 8-week period, and this provision enabled a working week of up to 60 hours to be done. In the construction of the national motor roads and in building work for the army, it had been provided, in order to make up for the loss due to bad weather in winter, that hours might not exceed a weekly average of 48 calculated over the six winter months, with a maximum of 60 hours in any one week.

In the metallurgical industry, the new collective rules provided for hours of work amounting in some cases to 10 a day (in Berlin, Potsdam, Erfurt, and Hildesheim). According to the report, constructors had in many cases ceased to regard the ninth and tenth daily hours as overtime, and applications for overtime permits related only to hours in excess of 10. In the shipbuilding industry, hours of work reached 60 in the week during the summer months.

A very great deal of overtime had been worked, under the provisions of collective rules, in many undertakings in the following industries: wood, clothing (especially the manufacture of uniforms), food, transport, fishing (including the industrial preparation and sale of fish), canned goods, and the restaurant and café trade. In butchers' and bakers' establishments the collective rules usually provide for a maximum 54-hour week, but daily working time may be increased to 10 hours in exceptional cases without previous authorisation. These possibilities of extension had been used to the full.

The report then refers to particular cases of extension authorised by the factory inspectors. This is the second method of increasing normal hours of work. Some extensions up to 10 hours a day, holding good for the whole season or year, were authorised as a normal timetable. In many instance the hours thus allowed proved insufficient, and the inspectors authorised a further extension beyond 10 hours a day; however, these permits applied in urgent cases only, if possible for limited periods and with certain guarantees regarding conditions

[1] Supplement to the Weekly Report of the German Institute for Business Research *(Institut für Konjunkturforschung)*, 26 Jan. 1938, p. 2.

of work. Thus an 11-hour day from Monday to Friday and a day of 8½ hours on Saturday (i.e. 63½ hours in the week) was authorised on several occasions, provided hours were reduced to 48 one week in four. In a mosaic workshop, which had received large orders of public importance, the inspector authorised a 13-hour day for two weeks, applying to adult male workers only. In a number of metallurgical establishments certain skilled workers did 12-16 hours a day, sometimes for considerable periods, in order to permit continuous operations. In other establishments, two shifts of 11½ or 12 hours each were worked, owing to lack of the labour required to form a third shift. Several engineering construction establishments had received permits to work 60-72 hours a week. The manufacture of printing rollers for the textile industry necessitated hours of work up to 72 a week for the five months which constitute this industry's busy season.

The report refers also to numerous similar cases of extension in industries of a seasonal character, and states that apart from seasonal industries such permits were granted more particularly to the metallurgical industry and to the building and kindred trades. This latter statement fits in with the statistical data analysed above.

Unfortunately there is no information concerning the total number of hours of overtime authorised or actually worked throughout the country or even in the individual provinces. Partial data published for certain districts show a considerable increase in overtime worked in 1936 as compared with the preceding years.

In the district of Kassel, about 55,000 hours of overtime were authorised in 1935 and about 455,000 hours in 1936; to this must be added 280,000 hours of overtime worked by a building undertaking with a staff of 16,000 divided into two shifts. The corresponding figures for the same two years were 308,294 and 496,439 in the district of Hanover and 13,621 and 200,682 in the district of Aachen.

In Bavaria the number of overtime permits increased from 177 in 1935 to 425 in 1936. The corresponding figures were 130 and 240 in Württemburg, and 696 and 1,060 in Baden (the latter including 162 and 227 respectively for weeks of 60-72 hours).

Infringements

As a direct consequence of the increase in the volume of employment, infringements of provisions governing hours of work and work on Sundays have considerably increased, even in the large establishments. This is revealed by the factory inspection report for Prussia. In some cases, however, the spread of collective rules, rendering the provisions of the Hours of Work Code more flexible, has helped to restrict abuses. In bakeries, for instance, the fixing of 4 a.m. instead of 4.30 as the earliest hour at which baking may begin has led to a decrease in the number of infringements of the regulations governing night work. Nevertheless, handicraft establishments in general continue to infringe the provisions of the law.

The following table shows the number of infringements of provisions governing hours of work and the Sunday rest reported by the factory inspectors. The industries mentioned are those appearing in

the earlier tables—that is, industries in which hours have been for several years either particularly long (metallurgy and the building trades) or below the average.

	Number of infringements 1932	1936
All industries	10,785	12,369
Metallurgy	695	1,571
Building and allied trades	609	712
Food industry	3,789	3,979
Textile industry	618	456
Clothing industry	767	969

Except in the textile industry, which is still on short time, infringements have increased in frequency in every case. The increase is particularly pronounced in the metallurgical industries, where the number more than doubled between 1932 and 1936.

Conclusions

A study of actual hours of work in Germany must of necessity be limited to industry proper, for lack of statistical material on the situation in other occupations. The available data enable an idea to be obtained of average daily hours of work in all industries together and in the principal branches. As stated above, these data cannot be compared with the limits placed by regulations on normal hours of work. Moreover, for reasons arising out of the method of compiling the statistics, these " actual daily hours " are in fact always less than the hours really worked by the typical worker, though it is not possible to determine exactly how great the difference is and thus to eliminate it. The figures given for " actual daily hours " can in any case be compared from one year to another and used as an index of the economic situation.

The statistics on the subject may be checked by means of the factory inspectors' reports, which provide partial information on the number of overtime permits, the number of hours actually worked in the different industries, the number of infringements, etc.

These two sources of information reveal a very pronounced fluctuation in hours of work during the different phases of the business cycle in Germany. Like employment, hours of work tend to adapt themselves to the volume of production. Such adaptation raises no legal difficulty in periods of depression, when hours of work have to be reduced; but when hours are to be extended beyond the normal limits, in order to make possible an increase in production, employers must take account of the regulations limiting overtime, governing the authorisation of additional hours, fixing overtime pay, etc. The flexibility of the regulations has enabled German industry to cope with an enormous increase of activity in certain branches, particularly metallurgy and the building and kindred trades.

The wide span between the production curves of the various sectors of industry is responsible for considerable differences in daily hours. In 1938 the working day was, on an average, half an hour longer in the production-goods industries than in those producing consumption

goods. This is a much larger difference than that existing in 1929, the last prosperous year before the big depression of 1930-1932. It may be explained on the one hand by the execution of the Four-Year Plan and particularly of the armament programme, which intensified activity in certain production-goods industries ; and on the other hand by the shortage of certain materials which have to be imported to meet the needs of the consumption-goods industries. A comparison of the figures for 1938 with those for 1937 shows that this difference is steadily growing.

It appears from official statements and publications that the extension of hours is due mainly to an acute shortage of skilled labour, which makes it difficult to form additional shifts. In some cases the skilled workers and supervisory staff are organised in two shifts with a very long working day, while the unskilled labourers are divided into three shifts. In any case industry has taken full advantage of all statutory provision for exemption from the limits normally placed on hours of work ; and the reform that came into force on 1 January 1939 has made the regulations governing hours still more flexible.

To sum up, a study of actual hours of work in Germany shows that hours have been adapted to the necessities imposed by increased production, a consequence of the Four-Year Plan and particularly of the rearmament programme.

The Wages of Native Miners in Southern Rhodesia

The following information is summarised from a review of the wages paid to Native workers employed on mines in Southern Rhodesia during the period 1930-1937, published by the Department of Statistics of the Government of Southern Rhodesia. [1]

Cash Wages

The monthly average number of Natives employed on mines in Southern Rhodesia for the years under review was as follows :

Year	Gold	Asbestos	Chrome	Coal	Other minerals	Total
1930	21,898	11,937	5,148	4,570	1,789	45,342
1931	23,930	5,500	2,209	2,727	836	35,202
1932	30,031	3,297	668	1,897	157	36,050
1933	42,452	3,103	753	1,687	274	48,269
1934	54,767	3,955	965	2,167	485	62,339
1935	66,765	5,248	879	2,408	926	76,226
1936	71,431	6,401	2,258	2,367	1,635	84,092
1937 [1]	71,613	6,670	4,806	2,981	2,270	90,600 [1]

[1] The total is for the complete year ; the separate figures are for the first six months.

[1] *Economic and Statistical Bulletin of Southern Rhodesia*, 21 July and 21 Aug. 1938 ; the figures of Natives in employment are taken from the issues of the same publication for 21 June and 21 Sept. 1937, and 7 Aug. 1938.

During these years the total wages paid to the Native mine workers followed the general employment figures, falling from £834,867 in 1930 to £558,176 in 1932 and rising progressively in subsequent years to £1,192,613 in 1937.

As regards the average wage per head, Natives employed in coal mining are paid by far the highest, the earnings of those employed on asbestos mines are higher than the average, and the lowest wages are paid on mica mines. During the past eight years the trend of monthly earnings has been downwards. Details are shown below:

Class of mines	Average monthly wage per worker							
	1930	1931	1932	1933	1934	1935	1936	1937
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Gold	28 2	27 10	24 3	21 8	20 8	19 11	20 1	21 2
Asbestos	34 11	32 10	28 0	26 3	22 11	23 0	22 2	23 2
Chrome	25 7	28 11	23 5	19 11	20 7	22 8	20 10	21 4
Coal	42 0	45 6	47 11	49 0	50 0	51 4	51 6	50 5
Copper	22 3	22 0	—	—	—	12 8	12 3	22 1
Iron pyrites	—	—	16 10	16 4	18 4	19 8	19 2	19 5
Lead	—	—	12 10	11 0	13 3	14 6	14 3	—
Mica	16 3	18 11	8 11	8 7	12 8	15 7	13 8	14 3
Lime	23 2	29 10	26 1	24 1	21 11	20 0	19 8	20 4
Nickel	30 4	26 8	—	24 0	22 7	19 4	20 4	23 8
Scheelite	18 9	18 0	10 0	11 6	13 3	14 8	19 6	19 8
Tin	13 7	15 0	15 3	9 7	11 4	10 0	13 10	15 9
All mines	30 8	29 7	25 10	22 10	21 10	21 0	21 2	22 4

In the case of the chief mining industry, gold, a distinction is drawn between large and small undertakings, a large undertaking being defined as one employing 300 or more workers. In June 1933 mines employing 300 Natives and over had a total Native labour force of 11,687, and the average monthly cash wage paid was 29s.5d. By June 1937 the number employed by such mines had risen to 18,108, and the average wage was 26s. 9d. Mines with less than 300 Natives were employing 31,257 in June 1933 at an average wage of 18s.10d. By June 1937 the labour force was 52,809 and the average wage 18s. 9d.

Between 1933 and 1936 the average wage paid on large mines fell to 25s. 2d., as a result of the inclusion in this group of mines previously classified as small which had developed into large mines but continued to pay the lower wages characteristic of the small mines. Thus, in 1935, of 16 new mines in the large class only one paid as much as the average wage of that class. The increase from 25s. 2d. in 1936 to 26s. 9d. in 1937 in the average paid by the large mines was similarly due in the main to the disappearance of these new entrants from the class.

On the gold mines Native underground workers earn rather higher

wages than surface workers. The following were the average monthly wages by classes of workers:

Year	Underground workers					Surface workers		
	Machines and drills	Hammer boys	Trammers and lashers	Others	Total	Mill and reduction	Others	Total
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1931	40 0	28 10	27 0	32 2	29 7	26 0	26 0	26 0
1933	36 1	22 7	21 0	25 6	23 3	20 7	20 2	20 4
1935	35 0	21 6	18 10	23 6	21 6	18 11	18 2	18 5
1936	34 0	21 5	19 3	23 7	21 7	18 11	18 7	18 9
1937	33 3	22 1	20 0	25 6	22 7	19 7	19 6	19 7

The higher level of wages paid by the large as compared with the small mines, which is a feature of the industry as a whole, is also characteristic of the prevailing wages paid by the two groups to the different classes of labour. This relationship also, however, has been disturbed in recent years by new entrants to the class employing over 300 Natives. Between the individual mines, moreover, there is a wide range of wages for the same class of work. In the case of machine and drill workers, where the range is particularly wide, the limits in June 1937 were 20s. and 68s. 6d., the predominant wage being 33s. 3d. For other workers in June 1937 wages varied between 12s. and 40s., with a predominant wage of 20s., for hammer boys; between 10s. and 34s. 3d., with 20s. predominant, for trammers and lashers (underground); and between 10s. and 32s. 6d., with 20s. predominant, for mill and reduction workers.

In the base metals and minerals industries Native underground workers, as in the case of the gold mines, earn rather higher wages than surface workers, and in general those employed on machines and drills are the best paid.

The following table shows the average monthly wages paid to Native labourers on asbestos mines.

Year	Underground workers					Surface workers		
	Machines and drills	Hammer boys	Trammers and lashers	Others	Total	Mill and reduction	Others	Total
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	d.
1931	53 0	38 8	30 8	32 10	32 2	30 8	34 0	33 2
1933	33 5	27 8	24 2	28 10	25 4	23 10	27 3	26 3
1935	27 6	23 8	22 7	25 9	23 6	20 0	22 0	21 5
1936	27 6	24 11	23 0	25 5	23 9	20 11	21 10	21 7
1937	27 2	25 3	23 3	25 3	23 11	22 6	22 11	22 10

It is to be noted that the average wage paid to all classes of labourers on asbestos mines fell sharply between 1931 and 1935, particularly between 1931 and 1934, and that the sharpest decrease was in the

wage paid to the more highly skilled Natives employed on machines and drills.

On chrome mines the labour required is relatively unskilled and there is little difference in the wages paid to the various classes of workers. In 1937 underground machine and drill boys received the highest average monthly wage of 24s. 2d. and " other surface workers " the lowest wage of 21s. 3d. Between 1931 and 1937, with the exception of machine and drill boys, the average wage for all types of work was lower at the end of the period than at the beginning, the lowest levels being in most cases reached in 1933 or 1934.

The highest Native wages in the mining industry are paid on coal mines. In contrast with other mines the average wage paid to workers on machines and drills increased steadily between 1931 and 1937, probably as a result of the introduction of piece work.

The averages were as follows :

Year	Underground workers					Surface workers
	Machines and drills	Hammer boys	Trammers and lashers	Others	Total	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1931	59 7	50 0	59 8	46 6	52 5	37 11
1933	62 9	53 2	62 0	50 1	57 8	39 3
1935	101 1	51 3	62 0	55 3	63 9	35 6
1936	110 9	49 11	63 5	48 8	62 5	36 4
1937	118 8	46 6	66 7	46 10	63 5	34 0

Rations and Housing

In addition to cash wages, the Native worker receives free quarters and free rations.

The compulsory ration scale, in force since 1935, prescribes the issue per week of 2½ lbs. meat, 2 lbs. beans, 2 lbs. fresh vegetables, 1 lb. shelled peanuts or 2 lbs. unshelled, and 3½ oz. salt, together with a daily allowance of 1½ lb. meal.

The cost of the rations provided by the mines varies from year to year. It was estimated to have been 7s. 6d. per head per month during 1937. The value of the housing provided is almost impossible to estimate. Minimum standards are prescribed, but the nature of the accommodation actually provided varies from Native-made huts to brick houses. A general practice is to provide each Native with building material and to allow him three days (usually with pay) in which to build his hut. The total cost may roughly be estimated at 7s. 6d. for each hut.

Every mine employing 300 Natives or over is required to provide regular medical attendance by a duly qualified medical practitioner.

It may be estimated that, in general, the value of the rations, the housing, and the medical attendance, provided amounts to between 7s. 6d. and 10s. per head per month. It is doubtful, however, whether the differences in the quality of the housing provided on mines can be assessed in terms of money.

STATISTICS

Employment and Unemployment

Statistical tables on employment, unemployment, hours of work, wages, and cost of living, in different countries are compiled and published at quarterly intervals in this *Review* (in the January, April, July and October issues). In view, however, of the interest taken in the statistics of employment and unemployment and their frequent changes, the tables on these two subjects are compiled at monthly intervals; they also appear therefore in the issues of the *Review* intermediate between the quarterly issues.

Tables I and II give statistics on the *general level of employment* and the *general level of unemployment*. As these series purport to measure different aspects of the same phenomenon, the two tables should be read in conjunction. Figures for the different industries or occupations covered by these series are given in the *Year-Book of Labour Statistics, 1938*, which also gives figures for unemployment among males and females where available. For further information on the scope and method of presentation of the following data, reference should be made to the introductory statement given in the January 1939 number of the *Review*.

Explanation of Signs used in the Tables

The sign * signifies : " figures do not exist ".
The sign — signifies : " figures not yet received ".
The sign † signifies : " provisional or estimated figures ".
The sign —— between two figures of a series signifies that the former series has been replaced by another, or revised.
The sign ʳ signifies : " figure revised since the previous issue ".
The sign • signifies : " economic group represented by a few branches only ".
Figures in *thick-faced* type : indexes (100) of the base year (in all tables of index numbers).
Figures in *italics* : index numbers with a year later than 1929 as base.

TABLE I. STATISTICS OF EMPLOYMENT

Indexes of numbers in employment, of total hours worked, or of degree (percentage) of employment

(1929 = 100 [1])

Date	Germany (excluding Austria)				Austria	Australia		Belgium
	Sickness insur. statistics	Statistics of establishments			Sickness insurance stat.	Statistics of establishments		Voluntary unemp. insurance stat.
	Agric., mines, ind., transport, comm., adm.	Mines, industries			Mines, ind., transport	Industries		Mines, ind., transport *, commerce *
	Wage earners, sal. employees	Wage earners		Salaried empl.	Wage earners, sal. employees	Wage earners, sal. employees		Wage earners, sal. employees
	Number	Number	Hours	Number	Number	Number	Degree of empl.	Degree of employment
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	93.3	87.0	83.5	94.7	95.1	93.0	91.5	96.6
1931	81.5	72.0	66.4	83.6	86.6	74.6	72.4	87.4
1932	71.1	59.5	53.8	69.6	76.4	74.1	71.0	78.2
1933	74.0	65.9	61.5	68.4	70.6	81.8	77.4	81.1
1934	85.5	83.5	80.6	76.3	69.8	89.7	84.0	78.3
1935	90.6	91.9	88.4	83.5	66.8	99.6	92.2	79.9
1936	97.2	100.5	99.4	90.0	64.6	109.4	100.2	85.3
1937	104.3	110.8 r	110.8 r	97.9	67.4	116.3	105.3	88.5
1938	110.9†	117.9†	118.9†	105.0†	*	—	—	—
1938 ; Jan.	102.7	109.7	109.4	100.8	62.1	121.5	108.8	81.3
Feb.	103.6	112.4	112.5	101.5	*	125.3	112.1	81.7
March	107.0	114.8	115.4	102.2	*	127.5	114.0	84.3
April	110.3	116.7	118.8	103.6	*	126.1	112.6	85.1
May	112.9	118.3	120.5	104.5	*	124.7	111.2	84.7
June	113.7	118.5	118.0	105.0	*	123.4	110.0	85.7
July	114.6	119.6	116.3	105.7	*	122.6	109.2	86.0
Aug.	115.1	120.0	117.4	106.4	*	123.9	110.2	86.6
Sept.	115.0	120.8	122.8	107.0	*	124.4	110.6	89.5
Oct.	115.0	121.2	123.8 r	107.2 r	*	124.6	110.6	85.6
Nov.	115.0	121.8 r	127.6	107.9	*	—	—	82.9
Dec.	109.1†	120.6†	123.8†	107.9†	*	—	—	—
1939 : Jan.	—	—	—	—	*	—	—	—
Persons covered Dec. 1937	18,109,163	3,500,000		*	926,267	*	*	916,463

Date	Canada		Denmark	Estonia		United States	
	Stat. of establishments		Stat. of establ.	Statistics of establ.		Stat. of establishments	
	Industries	Mines, ind., transp., comm.	Industries	Industries		Industries	
	Wage earners, salaried employees		Wage earners	Wage earners		Wage earners	
	Number		Hours	Number	Hours	Number	Hours
1929	100.0	100.0	*	100.0	100.0	100.0	100.0
1930	89.9	94.5	*	96.4	94.6	87.2	80.7
1931	78.7	85.3	100.0	87.7	84.2	73.7	62.8
1932	69.7	72.5	*91.6*	81.5	75.4	62.5	46.0
1933	67.8	70.6	*102.4*	83.1	77.6	69.2	53.1
1934	75.7	80.9	*113.5*	97.3	94.9	80.8	59.1
1935	81.6	83.7	*123.2*	109.8	103.6	86.1	66.6
1936	86.6	87.3	*128.9*	126.9	119.7	92.3	76.1
1937	95.8	96.4	*134.6*	145.2	139.1	99.8	81.0
1938	92.2†	93.4†	*132.0*	—	—	81.9†	—
1938 : Jan.	91.9	92.6	*120.0*	138.9	129.4	82.8	58.0
Feb.	92.1	90.4	*124.4*	139.4	125.0	83.2	60.2
March	92.3	88.1	*128.6*	144.3	146.8	82.7	60.2
April	92.2	90.1	*130.5*	149.3	127.8	80.8	58.3
May	93.6	93.9	*134.3*	159.6	157.1	78.7	57.1
June	93.2	95.2	*135.0*	155.6	130.3	77.0	55.9
July	91.7	94.0	*130.6*	149.9	141.5	77.3	56.6
Aug.	94.8	96.6	*135.8*	145.2	152.0	80.8	61.9
Sept.	93.8	97.9	*136.5*	143.9	148.4	83.8	65.2
Oct.	92.4	96.1	*138.0*	145.8	146.5	84.4	66.6
Nov.	91.8	95.6	*137.0*	147.7	153.2	85.4 r	65.8
Dec.	86.9	90.7	*133.0*	—	—	85.9†	—
1939 : Jan.	—	—	—	—	—	—	—
Persons covered Dec. 1937	552,174	1,081,603	*	44,297		4,327,180	

[1] Except for the series in italics : base : year later than 1929.

For notes relating to the various countries, see also *International Labour Review*, Vol. XXXVIII, No. 5, Nov. 1938, pp. 700 and 701.

TABLE I. STATISTICS OF EMPLOYMENT (*cont.*)

Indexes of numbers in employment, of total hours worked, or of degree (percentage) of employment
(1929 = 100 [1])

Date	United States (*cont.*)		Finland		France		Great Britain	
	Estimate		Statistics of establishments		Statistics of establishments		Compulsory unempl. ins. stat.	
	N.I.C.B.	A.F.L.	Industries		Mines, industries, transport *, commerce		Industries	Mines, ind., transport *, commerce
	Agr., mines, ind., transp., comm., services	Agr., mines, ind., transp., comm., services						
	Wage earners, salaried employees		Wage earners		Wage earners		Wage earners, salar. employees	
	Number	Number	Number	Hours	Number	Hours	Number	
1929	100.0	100.0	100.0	100.0	*	*	100.0	100.0
1930	94.3	95.2	87.0	81.9	100.0	100.0	92.5	96.0
1931	86.7	88.1 †	77.5	71.1	*92.5*	*88.7*	84.5	92.3
1932	78.7	79.8 †	77.6	71.9	*80.9*	*73.6*	84.7	91.7
1933	79.5	80.0 †	83.1	77.6	*79.4*	*74.3*	89.8	94.8
1934	85.4	84.8 †	93.2	88.0	*76.9*	*71.4*	94.5	99.2
1935	88.1	87.8	101.4	97.6	*73.5*	*68.2*	96.0	101.6
1936	93.0	91.7	101.8	98.2	*74.1*	*70.7*	102.2	106.8
1937	96.7	95.3	108.8	105.5	*78.6*	*66.1*	110.2	112.4
1938	90.4 †	90.8 †	109.0	103.5	*81.3*	*65.9*	104.1	111.0
1938 : Jan.	89.3	90.3	109.2	105.7	*82.6*	*66.2*	*	110.2
Feb.	88.6	89.9	*	*	*81.9*	*66.3*	*	110.4
March	88.6	89.8	*	*	*81.4*	*65.6*	*	110.9
April	88.8	90.3	109.2	103.7	*80.3*	*64.7*	*	111.1
May	88.8	89.6	*	*	*81.5*	*65.7*	*	111.1
June	89.8	89.8	*	*	*81.7*	*65.9*	104.1	110.8
July	90.0	90.1	109.8	103.0	*80.8*	*65.3*	*	111.1
Aug.	90.7	90.6	*	*	*80.4*	*65.1*	*	111.4
Sept.	92.3 r	92.1	*	*	*80.3*	*65.2*	*	111.2
Oct.	92.6†	92.4	107.7	101.7	*81.1*	*66.3*	*	111.5
Nov.	92.3†	92.2	*	*	*81.6*	*67.0*	*	111.2
Dec.	92.5†	92.6 †	*	*	*82.5*	*67.2*	*	111.5
1939 : Jan.	—	—	—	—	*82.6*	*68.8*	*	—
Persons covered Dec. 1937	44,279,000	43,261,563	67,222		2,311,555		5,536,528	11,446,000

Date	Hungary		Italy			Japan	Latvia		Luxemburg
	Sickness insurance statistics		M.C.	C.F.I.		Stat. of establishments	Sickness insur. stat.		Stat. of establishments
			Stat. of establishments						
	Industries	Mines, ind., transp., comm.	Industries	Industries		Industries	Industries	Ind., transp., com., adm. *, etc.	Mines, ind., transport
	Wage earners	Wage earners, sal. employees	Wage earners	Wage earners		Wage earners	Wage earners, salaried employees		Wage earners
	Number		Number	Number	Hours	Number	Number		Number
1929	100.0	100.0	*	100.0	100.0	100.0	*	100.0	100.0
1930	91.3	94.3	*	97.3	94.2	90.0	*	104.9	98.1
1931	82.9	89.2	*	88.8	83.5	81.7	*	97.5	84.1
1932	73.0	82.0	*	78.5	72.4	82.0	100.0	82.5	67.6
1933	73.6	81.2	*	79.4	75.1	89.9	*112.7*	87.8	64.8
1934	79.9	86.9	100.0	82.9	77.8	100.2	*130.8*	95.1	65.5
1935	85.9	91.2	*117.1*	94.0	81.0	109.7	*142.3*	100.8	66.8
1936	94.7	97.7	*121.6*	94.9	81.0	115.8	*149.6*	107.1	68.8
1937	104.0	104.0	*135.6*	104.5	91.7	128.8	*163.0*	116.3	74.9
1938	—	—	—	—	—	—	—	—	76.2
1938 : Jan.	95.0	99.9	*140.3*	102.0	85.7	134.9	*162.5*	119.2	76.5
Feb.	97.7	102.1	*143.6*	105.8	90.0	135.6	*163.4*	119.2	75.6
March	103.9	108.3	*144.2*	111.8	100.4	137.2	*172.2*	122.5	75.3
April	110.2	110.8	*143.4*	112.4	96.0	141.9	*172.9*	121.5	75.3
May	114.0	112.0	*142.4*	113.8	96.4	142.5	*177.3*	124.0	74.2
June	114.5	110.3	*138.6*	113.6	97.7	142.7	*175.9*	124.6	76.8
July	114.4	111.0	*135.3*	111.9	98.9	142.6	*174.1*	125.1	77.3
Aug.	118.0	114.5	*133.1*	112.5	93.8	142.9	*173.1*	124.2	76.8
Sept.	120.3	114.5	*140.0*	115.3	103.3	143.9	*174.7*	124.7	76.1
Oct.	—	116.6	*143.0*	113.5 †	99.3†	—	*178.8*	126.0	76.7
Nov.	—	—	*144.8*	—	—	—	*180.4*	128.5	76.5
Dec.	—	—	—	—	—	—	—	—	74.2
1939 : Jan.	—	—	—	—	—	—	—	—	74.0†
Persons covered Dec. 1937	629,115	1,045,133	1,144,139	1,402,330		1,336,219	104,979	206,596	33,741

[1] Except for the series in italics : base : year later than 1929.

For notes relating to the various countries, see also *International Labour Review*, Vol. XXXVIII, No. 5, Nov. 1938, pp. 700 and 701.

Abbreviations : N.I.C.B. = National Industrial Conference Board ; A.F.L. = American Federation of Labor ; M.C. = Ministry of Corporations ; C.F.I. = Fascist Confederation of Industry.

TABLE I. STATISTICS OF EMPLOYMENT (*concluded*)

Indexes of numbers in employment, of total hours worked, or of degree (percentage) of employment
(1929 = 100 [1])

Date	Norway			Netherlands	Poland			Switzerland
	Statistics of establishments			Voluntary unempl. insurance stat.	Statistics of establishments			Statistics of establishments
	Mines, industries		Ind., transport, commerce	Mines, industries, transp., comm., etc.	Industries		Mines, industries	Industries
	Wage earners			Wage earners, salaried employees	Wage earners, salaried employees			Wage earners
	Number	Hours	Number	Degree of empl.	Number	Hours	Number	Number
1929	*	*	*	100.0	100.0	100.0	100.0	100.0
1930	*	*	*	98.0	84.5	82.9	87.2	96.5
1931	*	*	*	90.5	71.3	69.3	74.5	88.3
1932	*	*	*	79.4	62.3	56.9	64.0	75.9
1933	*	*	*	77.7	65.0	58.3	63.7	73.3
1934	*	*	*	76.5	72.0	67.1	69.1	73.7
1935	*99*	*101*	*	72.6	77.1	72.6	72.8	70.4
1936	*104*	*108*	*101*	71.5	83.4	77.9	77.8	70.2
1937	*111*	*112*	*107*	77.7	94.1	89.8	88.0	78.1
1938	*108*	*110*	*108*	79.7†	101.6†	97.8	94.9†	—
1938 : Jan.	*	*	*	72.2	88.1	83.6	84.5	*
Feb.	*	*	*	74.6	90.7	88.2	86.5	*
March	*103*	*105*	*102*	77.8	95.9	92.2	90.4	77.7
April	*	*	*	79.9	98.6	95.7	92.5	*
May	*	*	*	80.9	101.7	97.6	94.6	*
June	*114*	*113*	*111*	81.9	103.5	97.8	96.1	77.7
July	*	*	*	82.6	104.8	93.9	97.4	*
Aug.	*	*	*	83.1	107.3	100.9	99.4	*
Sept.	*106*	*109*	*111*	83.1	107.8	104.8	99.9	78.6
Oct.	*	*	*	83.0	114.1	107.1	104.5	*
Nov.	*	*	*	81.5 r	109.8	109.4	101.3 r	*
Dec.	*108*	*113*	*109*	75.6†	96.3†	102.0	91.1†	—
1939 : Jan.	*	*	*	—	—	—	—	*
Persons covered Dec. 1937	101,600		200,700	480,671	567,153		732,982	230,463

Date	Sweden			Czecho-Slovakia	Union of South Africa			Yugoslavia
	I Stat. of establ.		II Stat. of establ.	Sickness insurance statistics	Statistics of establishments			Sickness & accident insurance statistics
	Mines, industries		Mines, ind., transp., comm.	Agr., industries, transport [2], comm.	Industries	Mines, ind., transport [2]		Ind., transport [2], commerce, etc.
	Wage earners		Wage earners	Wage earners, salaried employees	Wage earners, salaried employees			Wage earners, salaried employees
	Number	Hours	Number	Number	Europeans		Total	Number
1929	100.0	100.0	*	100.0	100	100.0	100.0	100.0
1930	99.8	98.6	*	97.6	96	97.4	98.1	104.3
1931	91.3	85.8	*	92.3	92	93.5	93.8	100.7
1932	86.0	77.8	*	82.6	83	87.6	87.2	88.8
1933	85.0	78.4	*89.1*	75.4	89	90.3	91.2	86.1
1934	91.6	89.5	*97.4*	75.0	105	100.3	102.3	89.8
1935	96.9	96.2	*103.1*	76.6	114	109.7	114.1	93.3
1936	102.1	102.2	*108.7*	82.3	121	117.6	124.8	101.8
1937	109.1	109.8	*117.3*	90.0	127	125.2	131.6	112.4
1938	—	—	—	90.9 [3]	—	—	—‡	—
1938 : Jan.	*	*	*	79.5	126	127.4	131.4	102.8
Feb.	*	*	*	82.1	128	128.7	135.9	107.8
March	*	*	*116.1*	86.1	127	128.9	138.0	113.0
April	*	*	*	91.5	124	128.1	138.5	116.6
May	*	*	*	95.9	124	128.4	138.8	122.7
June	*	*	*118.1*	96.9	123	128.5	139.1	*125.6
July	*	*	*	98.0	123	128.6	138.6	123.8
Aug.	*	*	*	97.6	122	128.4	137.6	125.1
Sept.	*	*	*119.3*	68.0 [3]	122	128.4	136.9	124.7
Oct.	*	*	*	52.0 [3]	122	128.8	136.5	122.0
Nov.	*	*	*	56.1 [3]	—	—	—	—
Dec.	*	*	—	54.4 [3]	—	—	—	—
1939 : Jan.	*	*	*	—	—	—	—	—
Persons covered Dec. 1937	372,195		265,649	2,211,648	58,246	173,165	682,438	673,942

[1] Except for the series in italics : base : year later than 1929. [2] New territory. [3] Average of 8 months.

For notes relating to the various countries, see also *International Labour Review*, Vol. XXXVIII, No. 5, Nov. 1938, pp. 700 and 701.

TABLE II. STATISTICS OF UNEMPLOYMENT

Date	Germany (excluding Austria)			Austria			Australia	
	Employment exchange statistics			Unemployment insurance statistics		Employment exchange statistics	Trade union returns	
	Applicants for work registered	Unemployed registered		Unemployed in receipt of benefit		Applicants for work registered	Unemployed	
		Number	Per cent.	Number	Per cent.		Number	Per cent.
1929	1,919,917[1]	1,891,956	9.3[r]	164,477	12.3	192,062	47,359	11.1
1930	3,130,082	3,075,580	15.3[r]	208,389	15.0	242,612	84,767	19.3
1931	4,618,537	4,519,704	23.3[r]	253,368	20.3	300,223	117,866	27.4
1932	5,703,088	5,575,492	30.2[r]	309,968	26.1	377,894	120,454	29.0
1933	5,083,140	4,804,428	26.3[r]	328,844	29.0	405,740	104,035	25.1
1934	3,306,628	2,718,309[2]	14.9[r 2]	287,527	26.3	370,210	86,865	20.5
1935	2,567,523[3]	2,151,039[3]	11.6[r 3]	261,768	23.4	348,675	71,823	16.5
1936	1,889,626	1,592,655	8.3[r]	259,185	22.9	349,663	53,992	12.2
1937	1,109,914	912,312	4.6[r]	231,313	20.4	320,961	41,823	9.3
1938	585,311	429,461	2.0†	174,070†	15.3†	243,714	40,434†	8.7
1938: Jan.	1,223,065	1,051,745	5.3	302,263	26.5	401,001	*	*
Feb.	1,125,796	946,334	4.8	300,294	26.3†	396,000	37,111	8.0
March	702,570	507,649	2.5	263,000	23.1†	364,680	*	*
April	605,614	422,530	2.1	280,000[4]	24.6†	403,643[3]	*	*
May	506,613	338,355	1.6	246,000	21.6†	350,728	39,824	8.6
June	448,848	292,240	1.4	190,000	16.7†	274,627	*	*
July	363,379	218,328	1.0	123,619	10.8†	151,026	*	*
Aug.	310,939	178,762	0.9	91,511	8.0†	113,655	43,092	9.2
Sept.	281,331	155,996	0.7	73,488	6.4†	99,865	*	*
Oct.	298,400	163,941	0.8	69,617	6.1†	106,543	*	*
Nov.	288,153	152,430[r]	0.7	72,051	6.3†	112,745	41,710†	8.9
Dec.	576,812	455,656[r r]	2.2†	77,000†	6.8†	150,058[r]	*	*
1939: Jan.	—	302,000†[r]	—	—	—	156,200†	*	*
Base figure	*	20,420,000†		1,140,500†		*	468,634†	

Date	Belgium			Canada			Chile
	Voluntary unempl. insurance stat.			Trade union returns		Employment exchange statistics	Employment exchange statistics
	Percent. unemployed in receipt of relief[5]		Unemployed (daily average during the month)	Unemployed			
	Wholly	Partially		Number	Per cent.	Applicants for work registered	Applicants for work registered
1929	1.3	3.0	12,636†	11,488	5.7	14,996	*
1930	3.6	7.9	36,102†	22,873	11.1	33,008	*
1931	10.9	16.9	110,392†	33,625	16.8	69,719	29,345
1932	19.0	20.7	210,575†	38,777	22.0	75,140	107,295
1933	17.0	17.2	210,007†	33,488	22.3	81,809	71,805
1934	19.0	17.2	234,730†	28,320	18.2	88,888	30,055
1935	17.9	12.8	211,533	25,336	15.4	84,050	10,672
1936	13.4	10.0	154,531	23,500	13.2	90,133	6,474
1937	11.5	9.8	126,535	21,639	10.8	88,516	3,244
1938	—	—	174,003	29,644†	13.1	105,236	—
1938: Jan.	16.0	19.4	199,070	27,590	12.4	90,866	3,174
Feb.	15.3	17.8	196,006	30,282	13.7	93,077	3,085
March	14.2	14.8	168,985	28,141	12.8	112,561	3,418
April	13.1	14.7	158,932	28,910†	13.1	116,948	3,382
May	13.1	18.4	163,941	29,130	13.2	115,914	4,534
June	12.3	16.8	154,436	29,941	13.5	111,680	5,410
July	12.1	16.1	152,462	30,651	14.0	108,383	4,588
Aug.	12.5	15.7	149,779	25,088	11.6	102,581	4,866
Sept.	13.0	15.1	154,340	23,203	10.4	101,187	5,191
Oct.	14.1	16.1	163,771	29,160	12.3	107,749	5,416
Nov.	15.5	16.1	185,454	33,387[r]	13.7	113,251	5,578
Dec.	—	—	240,860	40,340†	16.2	88,639	—
1939: Jan.	—	—	—	—	—	—	—
Base figure	972,780			249,000†		*	*

[1] Average for 11 months. [2] Since March 1935, including the Saar Territory. [3] Since 31 July 1933, not including persons employed in labour camps. [4] Revised series (including additional persons now entitled to benefits and amounting in April to 111,000). [5] Unemployed registered. [6] During the month. [7] Excluding unemployed registered in the Sudete territory (196.000, 218,000, and 188,500, at the end of November, December, and January, respectively).

TABLE II. STATISTICS OF UNEMPLOYMENT (*cont.*)

Date	Denmark			Danzig (Free City of)	Estonia	Finland	United States			
	Trade union fund returns		Employment exchange statistics	Employment exchange statistics	Employment exchange statistics	Employment exchange statistics	Estimates		Trade union returns	Employment exchange statistics
	Unemployed		Applicants for work registered	Unemployed registered	Unemployed registered	Unemployed registered	Percentage unemployed			Applicants for work registered
	Number	Per cent.					N.I.C.B. [3]	A.F.L. [3]	Weighted	
1929	42,817	15.5	44,581	12,905	3,172	3,877	1.0	3.9	8.2	*
1930	39,631	13.7	40,551	18,291	3,089	8,009	7.9	9.8	14.5	*
1931	53,019	17.9	59,430	24,898	3,542	11,495	16.4	17.7[4]	19.1	*
1932	99,508	31.7	126,039	33,344	7,121	17,351	24.9	26.3[4]	23.8	*
1933	97,478	28.8	121,115	31,408	8,284	17,139	25.1	27.1[4]	24.3	*
1934	81,756	22.1	97,595	20,326	2,970	10,011	20.5	23.6[4]	20.9	*
1935	76,195	19.7	92,406	17,983	1,779[1]	7,163	18.9	20.8	18.5	7,449,841
1936	78,669	19.3	93,261	13,533	1,276	4,796	15.5	18.2	13.3	7,705,270
1937	95,103	21.9	107,124	8,009	1,160	3,763	13.2	15.8	10.5	5,154,730
1938	97,076	21.4	112,241	3,499	1,243	3,602	19.8†	20.7†	15.3†	—
1938: Jan.	130,288	29.2	150,097	10,223	2,255	4,579	20.3	20.8	16.2	6,054,616
Feb.	124,228	27.7	145,021	8,580	1,798	4,544	21.0	21.1	16.6	6,745,702
March	99,076	22.1	119,659	4,722	1,805	3,635	21.1	21.3	17.2	6,778,368
April	90,983	20.3	107,792	3,157	1,302	3,462	21.0	21.0	16.7	7,253,948
May	78,541	17.5	93,422	2,022	872	2,963	21.1	21.6	16.4	7,520,549
June	75,227	16.7	86,616	1,544	684	2,414	20.3	21.6	16.3	7,830,940
July	76,743	16.9	87,950	1,139	518	2,186	20.2	21.3	15.7	8,087,891
Aug.	76,659	16.9	86,566	1,048	522	2,747	19.6	20.9	14.6	8,121,410
Sept.	76,739	16.8	89,231	1,200	607	3,192	18.3[r]	19.7	14.0	7,968,668
Oct.	86,188	18.8	99,919	1,757	999	4,041	18.2[r]	19.6	13.4	7,743,043
Nov.	103,701	22.7[r]	119,360	1,985	1,719	5,172	18.5†	19.6	13.2[r]	7,529,384
Dec.	146,533	31.6[r]	161,263	4,612	1,831	4,294	18.3†	19.5†	13.0	7,215,961
1939: Jan.	137,852†	29.8†	155,814	—	2,252†	—	—	—	13.3†	—
Base figure	463,067†		*	*	*	*	54,258,000†	53,143,473†	1,017,000	*

Date	France		Great Britain and Northern Ireland					Great Britain
	Public relief fund statistics	Employment exchange statistics	Unemployment insurance statistics (16-64 years)					Employment exchange statistics
			Excluding agriculture				Including agriculture	
			Wholly unemployed (including casuals)		Unemployed owing to temporary stoppages			
	Unemployed in receipt of relief	Applications for work	Number	Per cent.	Number	Per cent.	Per cent.	Applicants for work registered
1929	928	10,052	994,091	8.2	268,410	2.2	*	1,237,880
1930	2,514	13,859	1,464,347	11.8	526,604	4.3	*	1,953,935
1931	56,112	75,215	2,129,359	16.7	587,494	4.6	*	2,636,805
1932	273,412[5]	308,096	2,254,857	17.6	573,805	4.5	*	2,744,789
1933	276,033	307,844	2,110,090	16.4	456,678	3.5	*	2,520,616
1934	345,033	376,320	1,801,913	13.9	368,906	2.8	*	2,159,231
1935	426,931	465,875	1,714,844	13.1	312,598	2.4	*	2,036,422
1936	431,897	475,272	1,497,587	11.2	251,379	1.9	*	1,754,975
1937	350,333	379,095	1,277,928	9.4	204,020	1.5	*	1,484,399
1938	375,742	408,024	1,423,662	10.3	378,918	2.8	12.6	1,790,681
1938: Jan.	403,813	438,328	1,466,354	10.7	351,483	2.6	13.0	1,827,607
Feb.	412,386	444,376	1,466,887	10.7	340,630	2.5	12.8	1,810,421
March	401,056	433,817	1,425,596	10.4	338,483	2.5	12.4	1,748,981
April	393,054	424,636	1,394,315	10.2	365,599	2.7	12.4	1,747,764
May	380,826	411,835	1,375,768	10.0	404,303	3.0	12.5	1,778,805
June	362,899	390,868	1,351,865	9.9	477,617	3.5	12.8	1,802,912
July	344,517	370,688	1,338,509	9.8	480,569	3.5	12.5	1,773,116
Aug.	338,383	366,331	1,333,082	9.7	447,161	3.3	12.2	1,759,242
Sept.	338,409	368,187	1,387,087	10.1	419,695	3.1	12.4	1,798,618
Oct.	361,724	401,936	1,486,159	10.5	313,190	2.2	12.3	1,781,227
Nov.	367,106	400,956	1,529,133	10.8	310,313	2.2	12.7	1,828,103
Dec.	404,730	444,327	1,529,190	10.8	297,970[r]	2.1[r]	12.7	1,831,372
1939: Jan.	415,987	460,816	1,635,378[6]	11.6	381,776	2.7	14.1	2,039,026
Base figure	*	*	14,120,000				14,839,500	*

[1] Since January 1935 applicants for work registered. [2] National Industrial Conference Board. [3] American Federation of Labor. [4] Figures overestimated, but by no more than 500,000 from total unemployment. [5] From July 1932 onwards, including unemployed in receipt of relief from the welfare offices. [6] There were in addition 26,342 unemployed insured juveniles under 16 years (not included in the series).

TABLE II. STATISTICS OF UNEMPLOYMENT (*cont.*)

Date	Hungary	Netherlands Indies	Ireland		Japan [3]		Latvia
	Employment exchange statistics	Employment exchange statistics	Employment exchange statistics		Official estimates		Employment exchange statistics
			Applicants for work registered		Unemployed		
	Applications for work registered	Applicants for work registered	With claims to unempl. benefit	Total	Number	Per cent.	Applications for work registered
1929	15,173	*	14,679	20,702	*	*	5,617
1930	43,592[1]	*	16,378	22,398	369,408	5.3	4,851
1931	52,305	6,964	17,852	25,230	422,755	6.1	8,709
1932	66,235	10,922	20,217	62,817[2]	485,681	6.8	14,587
1933	60,595	14,576	19,897	72,255	408,710	5.6	8,156
1934	52,157	15,784	20,558	103,671	372,941	5.0	4,972
1935	52,048	17,418	18,410	119,498	356,044	4.6	4,825
1936	52,114	19,700	16,318	99,834	338,365	4.3	3,851
1937	48,359	19,281	19,418	82,425	295,443	3.7	3,014
1938	—	—	20,570	88,714	—	—	2,164
1938: Jan.	49,832	18,150	25,345	105,449	271,874	3.4	4,123
Feb.	50,442	17,098	23,890	104,829	265,845	3.3	4,071
March	50,850	16,861	22,910	102,515	254,906	3.1	3,622
April	47,423	16,363	20,433	100,076	243,093	3.0	2,611
May	46,445	15,961	19,217	97,571	227,992	2.9	1,313
June	45,415	15,832	19,614	71,959	230,262	2.9	1,148
July	45,454	16,386	17,801	68,320	—	—	887
Aug.	47,659	16,732	18,580	70,552	—	—	604
Sept.	47,413	16,409	18,167	70,411	—	—	663
Oct.	45,328	16,467	20,209	91,280	—	—	1,060
Nov.	43,631	—	20,324	93,223	—	—	2,132
Dec.	—	—	20,355	88,380	—	—	3,737
1939: Jan.	—	—	25,431	105,012	—	—	—
Base figure	*	*	*		7,978,614		*

Date	Lithuania [3]	Mexico	Norway			New Zealand	Portugal
	Employment exchange statistics	Official estimates	Trade union fund returns		Employment exchange statistics	Employment exchange statistics	Employment exchange statistics
			Unemployed			Unemployed (males)	
	Unemployed registered	Number unemployed	Number	Per cent.	Unemployed [4]	Registered [5]	Unemployed registered
1929	*	*	5,902	15.4	19,089	2,895	*
1930	*	75,695[6]	7,175	16.6	19,353	5,318	*
1931	*	257,979	*	22.3	27,479	41,431	*
1932	*	339,378	14,790	30.8	32,705	51,549	33,352
1933	*	275,774	16,588	33.4	35,591	46,944[7]	25,255
1934	*	234,538	15,963	30.7	35,121	39,235	34,711
1935	3,780	191,371	14,783	25.3	36,103	38,234	42,315
1936	3,533	186,904	13,267	18.8	32,643	36,890	43,057
1937	3,112	174,351 [7]	16,532	20.0	28,520	*	40,240
1938	—	—	—	—	28,923	*	—
1938: Jan.	4,783	186,437	24,746	28.9	33,046	8,056	—
Feb.	4,024	215,720	24,321	28.2	35,311	7,241	—
March	2,746	203,330	22,916	26.5	34,104	6,695	—
April	2,630	202,553	21,256	24.5	29,850	7,215	—
May	2,307	195,580	17,853	20.5	25,693	8,314	—
June	1,860	184,970	16,197	18.5	22,938	8,721	—
July	1,799	176,209 [7]	14,843	16·9	20,144	3,929	—
Aug.	1,511	196,145†	14,504	16.4	21,068	2,154	—
Sept.	1,582	—	15,683	17.7	26,105	1,575	—
Oct.	1,987	—	16,490 [7]	18.5	30,085	1,245	—
Nov.	—	—	18,519	20.7	33,861	1,026	—
Dec.	—	—	—	—	34,873	—	—
1939: Jan.	—	—	—	—	34,122	—	—
Base figure	*	*	89,316		*	*	*

[1] Since January 1930, including non-fee-charging private employment agencies. [2] Extended series. [3] The figures relate to the 1st of the following month. [4] Figure for the month of May. [5] The figures relate to the 15th of the month. [6] For the period 1927-1932, numbers of unemployed males remaining on registers of Government Labour Bureaux. [7] Monthly figures do not always relate to the end of each month. [8] Excluding persons totally unfit for employment for health or other reasons (approximately 8,000 at the end of 1937).

TABLE II. STATISTICS OF UNEMPLOYMENT (*concluded*)

Date	Netherlands				Poland		Sweden		
	Voluntary unemployment insurance statistics [1]			Employment exchange statistics	Employment exchange statistics		Trade union returns		Statistics of local unemployment committees
	Unemployed		Days of unemployment	Wholly unemployed registered	Applications for work registered		Unemployed		Applicants for relief registered
	Number	Per cent.	Per cent. [2]		Number	Per cent.	Number	Per cent.	
1929	24,300	7.1	5.9	*	129,450	4.9	32,621	10.7	10,212
1930	37,800	9.7	7.8	*	226,659	8.8	42,016	12.2	13,723
1931	82,800	18.1	14.8	138,231	299,502	12.6	64,815	17.2	46,540
1932	153,500	29.5	25.3	271,092	255,582	11.8	90,677	22.8	113,907
1933	163,000	31.0	26.9	322,951	249,660	11.9	97,316	23.7	164,054
1934	160,400	32.1	28.0	332,772	342,166	16.3	84,685	18.9	114,802
1935	173,700	36.3	31.7	384,691	381,935	16.7 [3]	81,385	16.1	61,581
1936	169,400	36.3	32.7	414,512	367,327	15.6	71,884	13.6	35,601
1937	137,700	29.2	26.9	368,909	375,088	14.6	67,351	11.6	18,213
1938	135,655†	27.7†	25.0†	—	347,509	12.6†	73,883†	11.7†	14,927
1938: Jan.	166,288	34.5	32.1	439,278	549,271	20.7	97,436	15.8	21,723
Feb.	156,575	31.0	29.8	420,790	546,822	20.4	92,282	14.7	21,766
March	142,578	29.2	26.8	372,433	489,985	18.0	86,783	13.9	19,184
April	133,106	27.0	24.8	354,674	389,191	14.4	73,966	11.9	15,791
May	128,016	26.0	23.9	332,049	300,951	11.0	58,452	9.3	12,463
June	122,873	24.9	22.9	311,032	259,016	9.3	59,620	9.5	10,421
July	122,013	24.6	22.3	302,312	226,712	8.2	50,905	8.1	8,481
Aug.	118,894	23.9	21.8	301,759	210,625	7.5	52,183	8.2	8,346
Sept.	118,383	23.8	21.8	301,730	212,283	7.5	53,506	8.4	9,154
Oct.	119,397	26.6	21.9	318 674	232,364	8.1†	63,830 [5]	10.0 [5]	12,349
Nov.	127,630†	25.9†	23.3 [5]	355,380	296,600	10.4†	75,289†	11.9†	17,350
Dec.	172,111†	34.8†	28.9†	—	456,286	15.9†	122,343†	19.1†	22,099
1939: Jan.	—	—	—	—	—	—	—	—	—
Base figure	494,991†			*	2,863,364†		641,091		219† [4]

Date	Rumania [6]	Switzerland			Czecho-Slovakia			Yugoslavia
	Employm. exchange statistics	Unemployment insurance statistics		Employment insurance statistics	Trade union fund returns		Employment exchange statistics	Employment exchange statistics
	Unemployed registered	Percentage unemployed		Applications for work registered	Unemployed in receipt of benefit		Applicants for work registered	Unemployed registered
		Wholly	Partially		Number	Per cent.		
1929	7,288	1.8	1.7	8,131	23,763	2.2	41,630	8,370
1930	25,335	3.4	7.2	12,881	51,371	4.5	105,442	8,198
1931	35,737	5.9	12.1	24,208	102,179	8.3	291,332	9,930
1932	38,890	9.1 [6]	12.2 [6]	54,366	184,555	13.5	554,049	14,761
1933	29,063	10.8	8.5	67,867	247,613	16.9	738,267	15,997
1934	17,253	9.8	6.1	65,440	245,953	17.4	676,994	15,647
1935	13,852	11.8	5.9	82,468	235,623	15.9	686,269	16,752
1936	13,549	13.2	5.3	93,009	208,096	13.1	622,687	19,436
1937	10,851	10.0	2.5	71,130	151,167	8.8	408,949	21,650
1938	—	—	—	65,583	—	—	335,518 [7]	22,517
1938: Jan.	12,096	14.0	4.0	95,722	222,050	12.4	519,002	44,234
Feb.	11,887	13.6	4.4	93,103	220,138	12.3	511,288	42,145
March	10,867	9.3	4.8	66,631	204,132	11.4	434,506	36,413
April	7,057	7.5	4.6	60,370	173,487	9.7	360,849	29,184
May	5,618	6.8	4.7	56,108	145,692	8.4	284,785	18,023
June	5,348	6.1	4.8	48,658	121,827	6.8	224,170	14,828
July	3,836	5.8	4.6	49,703	107,596	6.0	184,118	13,049
Aug.	4,807	6.0	4.4	49,606	96,205	5.4†	165,423	10,973
Sept.	5,493	6.0	4.4	49,610	—	—	61,697 [8]	10,926
Oct.	5,290	6.8	4.1	57,405	—	—	77,331 [8]	12,103
Nov.	—	8.2	4.2	68,827	—	—	103,685 [8]	14,739
Dec.	—	—	—	91,257	—	—	142,316 [8]	23,590
1939: Jan.	—	—	—	85,377	—	—	—	—
Base figure	*	513,270		*	1,793,270†		*	*

[1] Excluding agriculture. Weekly averages. [2] Days of unemployment, as a percentage of the total possible working days of insured workers during the month. [3] Since 1935, percentage based on the number of persons covered by compulsory social insurance schemes. [4] Number of relief funds. [5] The figures relate to the 1st of the following month. [6] Up to 1931 quarterly statistics; afterwards monthly statistics. [7] Average of 8 months. [8] New territory.

Wages and Normal Hours of Work of Adult Males in Certain Occupations in Various Countries in October 1938

In 1938 the International Labour Office undertook a further enquiry into wages and normal hours of work in certain occupations in various towns, in continuation of previous enquiries, the results of which have been published in this *Review*. [1]

The present enquiry, like the preceding ones, is based on information compiled by the competent statistical services (national or municipal) in the various countries; the occupations considered, 30 in number, remain the same. It covers 79 towns in 27 countries, as compared with the enquiry of 1937, which covered 69 towns in 23 countries. The change arises from the fact that it has been possible to obtain data for this year for 6 former or new countries—Chile, Colombia, Italy, Luxemburg, Newfoundland, and Rumania. Figures are no longer available for Germany, Austria, Brazil, Portugal, Spain and Czecho-Slovakia. An outline of the general character of the data received will be found in the notes on the methods of compilation which follow the tables; special indications relating to particular figures are given at the foot of the tables.

In a general way, the data collected for the purposes of this enquiry can be used for purposes of international comparison only with the strictest reservations. The necessity for referring to the reservations made in previous articles, especially that on the 1932 enquiry [2], cannot be over-emphasised; in particular, they contain indications as to the method of using the figures for purposes of comparison either of workers' real wages or of the cost of labour. The present article includes an appendix giving for 1938 data similar to those given in the previous enquiries with a view to these two sorts of comparisons: the cost of a "basket of provisions" (foodstuffs only) for comparisons of the purchasing power of wages (table A), and coefficients for the conversion of the national currencies into certain currencies—the French franc, the Swiss franc, the £ sterling, and the United States dollar—for comparisons of the cost of labour (table B).

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[1] Cf. *International Labour Review*, Vol. XXXVII, No. 3, March 1938, pp. 370-396: "Wages and Normal Hours of Work in Certain Occupations in Various Towns in October 1937".

[2] Cf. in particular *International Labour Review*, Vol. XXVII, No. 6, June 1933, and Vol. XXVIII, Nos. 1 and 2, July and Aug. 1933: "Wages, Hours of Work, and Other Factors in the Remuneration of Workers in Certain Towns in October 1932".

Money Wages and Normal Hours

Table I gives information on the hourly wages of adult male workers in the different towns and occupations covered by the enquiry, distinguishing between rates and earnings.

Data on *rates* are derived from very different sources, according to the country or the occupation concerned : provisions of collective agreements or individual contracts, or laid down unilaterally by employers ; decisions of arbitration or other courts ; legal provisions ; wages offered at the employment exchanges, etc. In a general way, they apply to the workers engaged in the occupation to a degree which varies from one case to another, so that it is difficult to determine how far the figures are representative. The meaning of the various terms used to describe rates, such as " standard ", " typical ", " actual ", " current ", " predominant ", etc., is also very variable, so that classification on this basis is impossible ; even the expression " minimum rates " cannot in all cases be taken literally. In principle, rates relate to normal hours of work, but they may also include certain accessory forms of remuneration (cost-of-living bonus, allowance for tools, etc.). In most cases they relate to time workers ; in some occupations, however, basic time rates for piece workers are available—i.e., norms indicating what an average worker employed on piece work can earn per hour, or a minimum guaranteed rate—and these are included in the table, in brackets, in the rates columns. In cases where the data on rates were expressed in terms of a unit of time other than the hour, they have been reduced to the latter unit, the calculation being based on the number of normal hours of work per week (table II) ; for this purpose monthly and yearly rates have been reduced to a weekly basis by dividing them by 4.33 and 52 respectively.

The data on *earnings* are usually derived from the payrolls of a certain number of representative undertakings ; they express the average wages actually paid (including, as a rule, all bonuses, allowances, etc.), in most cases to all the workers employed, whether on time or on piece work, in the occupation, and, except in one case, for hours actually worked. Owing to the difficulty of compiling earnings by occupation, such data are available only for a very few towns and occupations. [1]

The data on the number of *normal* hours of work in the countries and occupations, given in table II, are either derived from the same sources as the data on wage rates or taken from legislative provisions. It should be emphasised that they do not indicate *actual* hours of work.[2]

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[1] Some information received from Great Britain for 1937, which is not precisely within the scope of the tables, is given after the notes on method.

[2] For statistics of hours actually worked, cf. in the *International Labour Review* : Quarterly Tables : statistics of the general level of actual hours of work ; and in *Year-Book of Labour Statistics, 1938* : actual hours of work, by industries.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*)

Industry and occupation (with code letter)	Argentina	Australia		Belgium	Canada			
	Buenos Aires	Melbourne	Sydney	Brussels	Halifax	Montreal	Ottawa	Toronto
	Rates	Rates *e*		Rates	Rates			
C. *Mechanical engineering:*	Pesos (n/c)	s. d.	s. d.	Frs.	$	$	$	$
Fitters and turners	0.92 *d*	2 5.45	2 6.00	6.74 *d*	0.75 *b c*	0.70 *b*	0.60 *b c*	0.65 *b c*
Iron moulders	0.90	2 2.59 *c*	2 3.14 *c*	5.93	0.68 *c*	0.63 *c*	0.60 *c*	0.65 *c*
Patternmakers	1.03 *c*	2 7.91	2 8.45	6.43	0.68 *c*	0.68 *c*	0.70 *c*	0.80 *c*
Labourers (unsk.)	0.53	1 11.73	1 9.82	4.78	0.39 *c*	0.35 *c*	0.38 *c*	0.43 *c*
E. *Building:*								
Bricklayers and masons	0.94	2 8.89 *c*	2 9.48 *c*	6.37	0.98	0.85 *c*	0.90	1.05
Structural iron workers	0.85	*	*	6.37	0.75	0.75	0.80	0.80
Concrete workers	0.85	1 10.91	1 11.45	6.37	0.40	0.40	0.45	0.50
Carpenters and joiners	0.85	2 6.14	2 8.73	6.37	0.65	0.70	0.85	0.95
Painters	0.88	2 5.50	2 6.91	5.80	0.55 *c*	0.66	0.65	0.75
Plumbers	1.00	2 7.27	2 9.82	6.65	0.85	0.75	0.95	1.00
Electrical fitters	0.81	2 5.45	2 7.64	5.85	0.85	0.75	0.80	1.00
Labourers (unsk.)	0.63	1 10.91	1 11.45	5.12	0.35 *c*	0.40	0.45	0.50
F. *Furniture making:*								
Cabinet makers	0.90	2 3.27	2 4.64	6.60	*	0.50 *c*	0.55 *c*	0.53 *c*
Upholsterers	0.90	2 2.73	2 4.91	6.00	*	0.73 *c*	0.45 *c*	0.65
French polishers	0.88	2 3.27	2 4.91	6.60	*	0.55 *c*	0.45 *c*	0.60
G. *Printing and bookbinding:*								
Hand compositors (Book and job)	1.36 *b*	2 5.86 *c*	2 6.14 *c*	7.58 *e*	0.67 *c e*	0.80 *c e*	0.73 *c e*	0.83 *c e*
Machine compositors (Book and job)	1.85 *b*	2 5.86 *c*	2 6.14 *c*	7.85 *e*	0.67 *c e*	0.80 *c e*	0.73 *c e*	0.83 *c e*
Machine minders	1.27	1 10.36	1 10.64	7.07 *e*	0.58 *b c e*	0.77 *b c e*	0.73 *b c e*	0.83 *b c e*
Bookbinders	0.96	2 4.64	2 4.91	6.92 *e*	0.67 *c e*	0.75 *c e*	0.71 *c e*	0.88 *c e*
Labourers (unsk.)	0.63	1 9.27	1 9.55	4.58	*	*	*	*
L. *Food industry:*								
Bakers	1.02 *b*	2 7.75 *b c*	2 9.07 *b c*	6.30	0.38 *e*	0.45 *c e*	0.38 *e*	0.44 *e*
M. *Electric power distribution:*								
Electrical fitters	0.89	2 5.45 *b*	2 7.64 *b*	7.88	0.82	0.62	0.67	0.91
Labourers (unsk.)	0.64	1 9.27	2 1.91	6.52	0.35	0.37	0.36	0.60
N. *Transport:*								
Trams and buses:								
Drivers	0.82 *d*	1 10.25 *c*	2 1.23 *c*	6.00	0.61 *b*	0.55 *b*	0.54 *b*	0.60 *b*
Conductors	0.68 *d*	1 10.25 *c*	2 0.00 *c*	6.00	*	0.55 *b*	*	0.60 *b*
Cartage:								
Motor drivers	0.98	1 10.63 *b c*	2 3.82 *b c*	5.63 *e*	0.36 *c e*	0.36 *c e*	0.43 *c*	0.45 *c*
Horse drivers (1 horse)	*	1 8.50	2 0.82	5.42 *e*	0.31 *e*	0.28 *c e*	0.35	0.41 *e*
Railways:								
Goods porters	*	1 9.50 *c*	2 0.95 *c*	4.75	0.50 *b*	0.50 *b*	0.50 *b*	0.50 *b*
Permanent way labourers	*	1 10.25	1 11.05 *c*	5.80	0.41 *c*	0.41 *c*	0.41 *c*	0.41 *c*
Q. *Local authorities:*								
Labourers (unsk.)	0.88	1 9.55	2 1.50	6.15	0.40	0.35	0.50	0.63

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Fitters and turners:* in Canada, machinists. *Hand compositors:* in Argentina, typographers. *Machine compositors:* in Argentina, linotype operators. *Machine minders (printing):* in Canada, pressmen. *Bakers:* in Argentina, table hands; in Australia, ovenmen. *Electric power distribution:* in Australia, linesmen. *Tram and bus drivers and conductors:* in Canada, tram employees only; in Halifax and Ottawa, tram operators (one-man). *Motor drivers:* in Australia, drivers of vehicles weighing under 3 tons. *Goods porters:* in Canada, railway freight truckers. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Canada (*cont.*)		Chile	Colombia	Denmark		Estonia	
	Vancouver	Winnipeg	Santiago	Bogotá	Copenhagen		Tallinn	
	Rates		Earnings	Earnings	Rates	Earnings	Rates	Earnings
C. *Mechanical engineering:*	$	$	Pesos	$	Kr.	Kr.	E. Kr.	E. Kr.
Fitters and turners	0.70 *b c*	0.65 *b c*	2.25	0.250	1.08	1.83	0.44 (0.33)	0.56
Iron moulders	0.75	0.65 *c*	2.25	0.150	*	1.94	0.24 (0.36) *b*	0.56
Patternmakers	0.80 *c*	0.78 *c*	2.12	0.106	*	1.00	0.48 (0.33)	0.51
Labourers (unsk.)	0.45 *c*	0.40	1.25	0.090	1.07	1.48	0.28 (0.24)	0.33
E. *Building:*								
Bricklayers and masons	1.10	1.10	1.87	0.211	1.33	2.47	0.43 (0.40)	0.46
Structural iron workers	1.13	0.85	1.75	0.202	*	*	0.37	0.37
Concrete workers	0.45	0.40	1.50	0.312	*	*	*	0.54
Carpenters and joiners	0.90	0.85	2.00	0.222	1.25 *d*	2.04 *d*	0.38 (0.34)	0.39
Painters	0.80	0.70	2.00	0.187	1.39	1.93	0.44	0.44
Plumbers	1.00	0.95	1.50	0.256	1.50	1.92	0.53	0.61
Electrical fitters	1.00	0.85	1.87	0.200	1.08	1.77	*	0.41
Labourers (unsk.)	0.45	0.43 *c*	1.50	0.087	*	1.82	0.28 (0.24)	0.30
F. *Furniture making:*								
Cabinet makers	0.55 *c*	0.55 *c*	2.25	0.281	1.23	1.73	0.39 (0.36)	0.40
Upholsterers	0.55 *c*	0.53 *c*	1.87	0.406	1.15	2.05	0.44 (0.33)	0.48
French polishers	0.60	*	1.75	0.143	*	*	0.41	0.41
G. *Printing and bookbinding:*								
Hand compositors (Book and job)	0.88 *e*	0.80 *c e*	3.00	0.193	1.40 *e*	*	0.46	0.47
Machine compositors (Book and job)	0.88 *e*	0.80 *c e*	2.75	0.575	1.60 *e*	1.81	0.50	0.53
Machine minders	0.88 *b e*	0.80 *b c e*	3.25	*	1.25 *e*	1.99	0.50	0.52
Bookbinders	0.92 *c e*	0.78 *c e*	2.00	0.187	1.27	1.88	0.43	0.43
Labourers (unsk.)	*	*	1.25	0.075	*	1.33	0.28	0.28
L. *Food industry:*								
Bakers	0.57 *c e*	0.43 *c e*	1.50	0.362	1.49 *c e*	1.60	0.33	0.35
M. *Electric power distribution:*								
Electrical fitters	0.97	0.80	1.87	0.426	*	*	0.44	0.53
Labourers (unsk.)	0.45	0.42	1.50	0.095	*	*	0.27	0.28
N. *Transport:*								
Trams and buses:								
Drivers	0.63 *b*	0.56 *b*	2.00	0.350	1.60 *c f*	*	0.41	0.50
Conductors	0.63 *b*	0.56 *b*	1.50	0.175	1.60 *c f*	*	0.29	0.35
Cartage:								
Motor drivers	0.53 *c*	0.45 *c*	1.75	0.572	1.35 *e*	1.40 *e*	0.43	0.43
Horse drivers (1 horse)	*	*	1.25	0.100	1.14 *e*	1.23 *e*	0.29	0.38
Railways:								
Goods porters	0.50 *b*	0.50 *b*	1.55	0.419	*	*	0.30	0.30
Permanent way labourers	0.41 *c*	0.41 *c*	1.25	0.117	*	*	*	*
Q. *Local authorities:*								
Labourers (unsk.)	0.58	0.42	1.20	0.080	*	1.65	0.26	0.34

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Fitters and turners:* in Canada, machinists. *Iron moulders:* in Tallinn, core makers. *Machine minders (printing):* in Canada, pressmen. *Tram and bus drivers and conductors:* in Canada, tram employees only. *Goods porters:* in Canada, railway freight truckers. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Averages calculated on the basis of daily or weekly wages, divided by normal hours of work. (*f*) Averages calculated on the basis of yearly or monthly wages, divided by total normal hours of work.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Estonia (*cont.*)		United States					
	Tartu		Baltimore	Boston	Chicago	Denver	Los Angeles	New Orleans
	Rates	Earnings	Rates					
C. *Mechanical engineering:*	E. Kr.	E. Kr.	$	$	$	$	$	$
Fitters and turners	0.31	0.34	*	*	*	*	*	*
Iron moulders	0.31 (0.24)	0.34	*	*	*	*	*	*
Patternmakers	*	*	*	*	*	*	*	*
Labourers (unsk.)	0.20 (0.14)	0.22	*	*	*	*	*	*
E. *Building:*								
Bricklayers and masons	0.41 (0.42)	0.42	1.500	1.500	1.700	1.500	1.250	1.250
Structural iron workers	*	*	1.500	1.500	1.700	1.430	1.375	1.375
Concrete workers	(0.25)	0.53	1.250 *b*	1.450 *b*	1.625 *b*	1.430 *b*	1.250 *b*	1.000 *b*
Carpenters and joiners	0.31 (0.34)	0.34	1.250	1.375	1.625	1.430	1.100	1.000
Painters	0.30	0.32	1.125	1.250	1.667	1.250	1.100	0.750
Plumbers	*	*	1.250	1.500	1.700	1.430	1.250	1.250
Electrical fitters	*	*	1.375 *b*	1.500 *b*	1.700 *b*	1.430 *b*	1.125 *b*	1.375 *b*
Labourers (unsk.)	0.25 (0.25)	0.26	0.500	0.850	1.025	0.714	0.625	0.500
F. *Furniture making:*								
Cabinet makers	0.26	0.28	*	*	*	*	*	*
Upholsterers	0.29	0.29	*	*	*	*	*	*
French polishers	*	*	*	*	*	*	*	*
G. *Printing and bookbinding:*								
Hand compositors (Book and job)	0.43	0.43	1.000	1.035	1.350	1.088	1.145	0.900
Machine compositors (Book and job)	0.56	0.58	1.000	1.075 *b*	1.385	1.088	1.230	0.900
Machine minders	0.48	0.52	1.000	1.075 *b*	1.385	1.163 *b*	1.230	*
Bookbinders	0.37	0.39	*	0.985	0.975 [1]	1.011	1.050	0.938
Labourers (unsk.)	0.28	0.28	*	*	*	*	*	*
L. *Food industry:*								
Bakers	0.32	0.33	1.125 *b*	1.167 *b*	0.800	0.825	0.850	*
M. *Electric power distribution:*								
Electrical fitters	0.39	0.40	*	*	*	*	*	*
Labourers (unsk.)	0.27	0.29	*	*	*	*	*	*
N. *Transport:*								
Trams and buses:								
Drivers	0.35 *b*	0.35 *b*	*	0.780 *b* [2]	0.800 *b* [2]	0.615 *b* [2]	0.680 *b* [2]	0.450 *b*
Conductors	0.35 *b*	0.35 *b*	*	0.780	0.800	0.615	0.680	*
Cartage:								
Motor drivers	*	*	0.781 [4]	0.781 [4]	0.781 [4]	0.781 [4]	0.781 [4]	0.781 [4]
Horse drivers (1 horse)	*	*	*	*	*	*	*	*
Railways:								
Goods porters	*	*	*	*	*	*	*	*
Permanent way labourers	*	*	0.406 [4]	0.406 [4]	0.406 [4]	0.406 [4]	0.406 [4]	0.406 [4]
R. *Local authorities:*								
Labourers (unsk.)	0.24 (0.24)	0.30	*	*	*	*	*	*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Concrete workers:* in the United States, cement finishers. *Electrical fitters (building):* in the United States, inside wiremen. *Machine compositors:* in Boston, linotype operators. *Machine minders (printing):* in Boston, linotype operators; in Denver, machinist operators. *Bakers:* in Baltimore and Boston, workers in Hebrew bakeries. *Tram and bus drivers and conductors:* in Tartu, bus employees only; in Boston and Chicago, employees after one year service, in Los Angeles, employees after 2 years' service; in New Orleans, bus drivers only, after 2½ years' service.

[1] Rates for bookbinding; for pamphlet work, etc. the rate is $1.00. [2] One-man car and bus operators $0.880. [3] One-man car and bus operators after 2 years' service: in Denver $0.665; in Los Angeles $0.750. [4] Averages for the whole country.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	United States (*cont.*)				France		
	New York	Philadelphia	St. Louis	San Francisco	Bordeaux	Lille	Lyons
	Rates				Rates		
C. *Mechanical engineering:*	$	$	$	$	Frs.	Frs.	Frs.
Fitters and turners	*	*	*	*	8.10	7.43	6.40 *b* [8]
Iron moulders	*	*	*	*	8.10	7.43	5.80 *b* [8]
Patternmakers	*	*	*	*	8.10	7.43	6.40 *b* [8]
Labourers (unskilled)	*	*	*	*	6.13 *c*	5.97	4.33 *c* [8]
E. *Building:*							
Bricklayers and masons	1.886	1.650	1.500	1.750	7.15	7.05	10.05
Structural iron workers	1.925	1.650	1.750	1.500	7.15	7.40	9.75 *b*
Concrete workers	1.750 *b*	1.250 *b*	1.575 *b*	1.250 *b*	7.15	7.13	10.70 *b*
Carpenters and joiners	1.750	1.250	1.500	1.250	6.93 *c*	7.20	10.08 *d*
Painters	1.550 *c*	1.125	1.500	1.214	6.70	6.84	9.75
Plumbers	1.875 *c*	1.440	1.625	1.375	7.08 *c*	7.20	10.35
Electrical fitters	2.000 *b*	1.500 *b*	1.500 *b*	1.375 *b*	6.70	7.55	9.75
Labourers (unskilled)	1.084 *c*	0.600	0.875	0.810	5.90	6.22	8.45 *b*
F. *Furniture making:*							
Cabinet makers	*	*	*	*	7.43 *c*	7.50	*
Upholsterers	*	*	*	*	7.43 *c*	7.50 *b* [5]	*
French polishers	*	*	*	*	7.43 *c*	7.34 *b*	*
G. *Printing and bookbinding:*							
Hand compositors { Book	1.363	1.130	1.100	1.300	8.68	7.85	9.50
Machine compositors { and job	1.363	1.130	1.190	1.300	8.68	12.65	9.50
Machine minders	1.363 [1]	1.130	1.190	1.363 *b*	8.68	7.85 [6]	9.50
Bookbinders	1.098	1.000	1.070	1.275	8.68	7.85	*
Labourers (unskilled)	*	*	*	*	5.80	6.61	*
L. *Food Industry:*							
Bakers	0.850 *b*	0.710 *b* [2]	0.945	1.072	[4]	7.75	7.70 *b*
M. *Electric power distribution:*							
Electrical fitters	*	*	*	*	7.15	7.83 *f*	*
Labourers (unskilled)	*	*	*	*	5.90	6.56 *f*	*
N. *Transport:*							
Trams and buses:							
Drivers	0.760 *b*	*	0.710 *b* [3]	0.700 *b* [3]	6.13 *c f*	6.00	6.55 *e b* [9]
Conductors	0.760 *b*	*	0.710 *b* [3]	0.700 *b* [3]	5.88 *c f*	5.00 *b*	6.55 *e b* [9]
Cartage:							
Motor drivers	0.781 [10]	0.781 [10]	0.781 [10]	0.781 [10]	7.41 *c*	6.56 *e*	*
Horse drivers (1 horse)	*	*	*	*	6.70	5.44 *e*	*
Railways:							
Goods porters	*	*	*	*	*	6.73 *f*	*
Permanent way labourers	0.406 [10]	0.406 [10]	0.406 [10]	0.406 [10]	7.35 *b*	6.73 *f*	*
Q. *Local authorities:*							
Labourers (unskilled)	*	*	*	*	6.43 *c f*	5.77 [7]	6.27

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Fitters and turners:* in Lyons, tool makers. *Iron moulders:* in Lyons, hand moulders and earth and sand core makers. *Patternmakers:* in Lyons, patternmakers (metal) with more than five years in the trade. *Structural iron workers:* in Lyons, fitters. *Concrete workers:* in the United States, cement finishers; in Lyons, cement-makers. *Electrical fitters (building):* in the United States, inside wiremen. *Labourers (unskilled) (building):* in Lyons, skilled labourers with nine months in the trade. *Upholsterers:* in Lille, velvet upholsterers. *French polishers:* in Lille, varnishers. *Machine minders:* in San Francisco, machinist operators. *Bakers:* in New York, bench hands in machine bakeries; in Philadelphia, ordinary bakeries; in Lyons foremen bakers. *Tram and bus drivers and conductors:* in New York, after 9 years' service; in St. Louis, after 1 ½ year service; in San Francisco, after 2 ½ years' service; in Lyons, tram drivers and conductors only; in Lille, tram operators (one-man) only. *Permanent way labourers:* in Bordeaux, line-keepers. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work. (*f*) Average calculated on the basis of monthly or yearly wages, divided by total normal hours of work.

[1] Workers tending from 1 to 4 machines. [2] Rates for workers in Hebrew bakeries $1.247. [3] One-man car and bus operators $0.780. [4] Frs. 0.35 per kg. of bread. [5] Leather upholsterers, Frs. 8.24. [6] Rotary-machine minders, Frs. 12.65. [7] Plus cost-of-living allowance. [8] Plus 20 per cent. increase following the introduction of the 40-hour week, and various cost-of-living allowances. [9] Average arrived at by multiplying the daily wage by 6 and dividing the result by 40. [10] Averages for the whole country.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	France (*cont.*)		Great Britain				
	Nancy	Paris	Birmingham	Bristol	Glasgow	Leeds	London
	Rates		Rates				
	Frs.	Frs.	s. d.	s. d.	s. d.	s. d.	s. d.
C. *Mechanical engineering:*							
Fitters and turners	7.35 *c*	11.68 (12.33) *d*	1 4.85 *e* [3]	1 4.98 *e* [3]	1 5.14 *e* [3]	1 4.60 *e* [3]	1 6.11 *e* [3]
Iron moulders	7.10 *b c*	*	1 5.36 *e* [3]	1 4.85 *e* [3]	1 6.61 *e* [3]	1 5.87 *e* [3]	1 6.11 *e* [3]
Patternmakers	8.34 *c*	*	1 6.18 *e* [3]	1 5.62 *e* [3]	1 6.61 *e* [3]	1 5.87 *e* [3]	1 7.38 *e* [3]
Labourers (unsk.)	5.18 *c*	8.25 (8.75)	1 0.77 *e* [3]	1 0.43 *e* [3]	1 1.12 *e* [3]	1 0.89 *e* [3]	1 1.61 *e* [3]
E. *Building:*							
Bricklayers and masons	7.20 *c*	11.35 *b*	1 7.50 [3]	1 7.50	1 8.25 *d*	1 7.50	1 9.00
Structural iron workers	7.33 *c*	*	1 6.50 *b*	1 6.50 *b*	1 6.50 *b*	1 6.50 *b*	1 7.50 *b*
Concrete workers	7.20 *c*	*	1 3.88 *b c*	1 3.88 *b c*	1 3.25 *b c*	1 4.00 *b*	1 4.63 *b c*
Carpenters and joiners	7.03 *d*	9.85	1 7.50 [3]	1 7.50	1 8.00	1 7.50	1 9.00
Painters	7.20	9.85	1 7.50 [3]	1 7.50	1 8.00	1 7.50	1 8.00
Plumbers	7.45	10.45	1 7.50 [3]	1 7.50	1 8.00	1 7.50	1 9.00
Electrical fitters	7.35	9.91	1 7.75	1 7.75	1 7.00	1 7.75	1 10.75
Labourers (unsk.)	5.75 *c*	*	1 2.75 [3]	1 2.75	1 3.00	1 2.75	1 3.75
F. *Furniture making:*							
Cabinet makers	6.33 *c*	10.10	1 7.00 [4]	1 6.50	1 7.50 [4]	1 7.50	1 9.00 [4]
Upholsterers	6.33 *c*	*	1 7.00 [4]	1 6.50	1 7.50 [4]	1 7.50	1 9.00 [4]
French polishers	5.45 *c*	*	1 7.00 [4]	1 6.50	1 7.50 [4]	1 7.50	1 8.50 [4]
G. *Printing and bookbinding:*							
Hand compositors (Book and job)	8.50	*	1 7.87 *e* [4]	1 7.87 *e* [4]	1 8.67 *e* [4]	1 7.87 *e* [4]	1 11.73 *e* [4]
Machine compositors (Book and job)	8.95	11.90	1 10.00 *e* [4]	1 10.00 *e* [4]	1 10.33 *c e* [4]	1 10.00 *e* [4]	2 1.60 *e* [4]
Machine minders	8.50	*	1 10.13 *c e* [4]	1 10.13 *c e* [4]	*	1 10.13 *c e* [4]	2 3.87 *c e* [4]
Bookbinders	8.50	11.90	1 7.87 *e* [4]	1 7.87 *e* [4]	1 8.67 *e* [4]	1 7.87 *e* [4]	1 9.33 *e* [4]
Labourers (unsk.)	5.35 *c*	*	1 2.80 *e* [4]	1 2.80 *e* [4]	1 3.60 *e* [4]	1 2.80 *e* [4]	1 6.93 *e* [4]
L. *Food industry:*							
Bakers	6.35 *b e*	*	1 3.42 *c e* [4 5]	*	*	1 3.25 *c e* [4 5]	1 4.00 *c e* [5]
M. *Electric power distribution:*							
Electrical fitters	7.13 *c*	*	1 7.28 *c*	1 7.26 *e*	1 8.00 *c e*	1 7.25	1 10.50
Labourers (unsk.)	6.54 *c*	*	1 2.53	1 4.98 *e*	1 2.55 *e*	1 3.25	1 5.00
N. *Transport:*							
Trams and buses:							
Drivers	6.42 *b c f*	*	1 5.38 *c e*	*	1 5.09 *c e*	1 4.63 *c e*	1 8.22 *c e*
Conductors	6.42 *b c f*	*	1 4.00 *c e*	*	1 4.69 *c e*	1 3.38 *c e*	1 7.57 *c e*
Cartage:							
Motor drivers	8.08 *f*	*	1 4.69 *c e* [4 6]	1 4.73 *c e* [4 6]	1 3.69 *c e* [4 6]	1 4.69 *c e* [4 6]	1 6.38 *b c e* [4 6]
Horse drivers (1 horse)	5.63 *e* [1]	*	* [7]	1 2.25 *e* [4 7]	1 1.25 *e* [7]	1 0.25 *e* [7]	1 3.13 *e* [4 7]
Railways:							
Goods porters	*	*	0 11.75 *e*	0 11.75 *e*	0 11.75 *e*	0 11.75 *e*	0 11.75 *e*
Permanent way labourers	5.25 *c*	*	0 11.75 *e*	0 11.75 *e*	0 11.75 *e*	0 11.75 *e*	1 0.25 *c e*
Q. *Local authorities:*							
Labourers (unsk.)	5.45	*	1 2.30 *e*	1 3.75 *e*	1 2.25 *e*	1 2.00	1 3.72 *c e* [8]

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Iron moulders:* in Nancy, hand moulders. *Bricklayers and masons:* in Paris, stucco makers. *Structural iron workers:* in Great Britain, erectors. *Concrete workers:* in Great Britain, levellers. *Bakers:* in Nancy, foremen bakers. *Tram and bus drivers and conductors:* in Nancy, tram drivers and conductors only. *Motor drivers (cartage):* in London, drivers of petrol vehicles with a carrying capacity of over 2 tons, up to and including 5 tons. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work.

[1] Average arrived at by multiplying the daily wage by 5 and dividing the result by 40. [3] See supplementary information on p. 407. [3] A travelling allowance of 2d. per working day is payable to all men working within the municipal boundary. [4] Rates described as minima in collective agreements. [5] Average of rates fixed by co-operative societies and those of other employers. [6] Rates for motor drivers employed by railway companies: 1s. 2.25d.; in London, 1s. 3d. [7] Rates for horse drivers employed by railway companies 1s. 0.50d.; in London, 1s. 1.25d. [8] Average of two figures representing the range of the rates usually paid by the great majority of the 30 Local Authorities affected in the County of London.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Great Britain (*cont.*)		Hungary	Ireland		
	Manchester	Newcastle	Budapest	Cork	Dublin	Dundalk
	Rates		Earnings	Rates		
C. *Mechanical engineering:*	s. d.	s. d.	Pengös	s. d.	s. d.	s. d.
Fitters and turners	1 4.85 *c* [1]	1 4.85 *c* [1]	0.81	2 0.04 *e*	1 8.30 *e*	1 5.94 *e*
Iron moulders	1 6.00 *e* [1]	1 5.62 *e* [1]	0.82	2 0.04 *e*	1 8.30 *e*	1 6.00
Patternmakers	1 6.12 *e* [1]	1 6.13 *e* [1]	0.92	2 0.04 *e*	1 9.06 *e*	1 6.70 *e*
Labourers (unsk.)	1 0.77 *e* [1]	1 1.02 *e* [1]	0.45	1 2.93 *e*	1 3.36 *e*	0 11.49 *e*
E. *Building:*						
Bricklayers and masons	1 7.50	1 7.50	0.69	1 10.50	1 11.50	1 10.00
Structural iron workers	1 6.50 *b*	1 6.50 *b*	0.66	*	1 10.25 *c*	*
Concrete workers	1 3.88 *b c*	1 4.00 *b*	0.67	1 4.00	1 5.00	1 1.50
Carpenters and joiners	1 7.50	1 7.50	0.68	1 10.50	1 11.00 [6]	1 9.00
Painters	1 7.50	1 7.50	0.68	1 10.50	1 10.50	1 9.00
Plumbers	1 7.50	1 7.50	0.91	1 11.50	2 0.25	1 9.00
Electrical fitters	1 7.75	1 7.75	0.93	2 1.00	2 1.00	2 0
Labourers (unsk.)	1 2.75	1 2.75	0.38	1 4.00	1 5.00	1 1.50
F. *Furniture making:*						
Cabinet makers	1 7.50	1 7.50	0.77	1 10.50	1 11.00 [6]	1 7.00
Upholsterers	1 7.50	1 7.50	0.80	1 10.50	2 0	1 7.00
French polishers	1 7.50	1 7.50	0.60	1 10.50	1 11.00	1 8.00
G. *Printing and bookbinding:*						
Hand compositors (Book and job)	1 8.67 *e* [3]	1 7.87 *e* [3]	1.92	1 11.87 *e*	1 11.73 *e*	1 6.93 *e*
Machine compositors (Book and job)	1 10.93 *e* [3]	1 10.00 *e* [3]	2.16	2 1.87 *e*	2 1.06 *e*	1 8.40 *e*
Machine minders	1 10.93 *c e* [3]	1 10.13 *c e* [3]	1.87	1 11.83 *e*	1 8.67 *c e*	1 6.93 *e*
Bookbinders	1 8.67 *e* [3]	1 7.87 *e* [3]	1.08	2 0 *e*	1 11.73 *e*	1 6.93 *e*
Labourers (unsk.)	1 3.33 *e* [3]	1 2.80 *e* [3]	0.94	1 3.32 *e*	1 3.67 *c e*	*
L. *Food industry:*						
Bakers	1 3.50 *e*	1 4.31 *c e* [3]	0.83	2 1.25 *c e*	2 2.36 *c e*	1 8.30 *b c*
M. *Electric power distribution:*						
Electrical fitters	1 7.61	1 6.68	0.86	2 1.00	2 1.00	2 0
Labourers (unsk.)	1 2.89	1 2.92	0.73	1 3.50 *e*	1 5.18 *e*	1 0.50
N. *Transport:*						
Trams and buses:						
Drivers	1 4.25 *c e*	1 4.07 *c e*	0.67	1 4.88 *b c e*	1 4.79 *c e*	1 2.13 *b c e*
Conductors	1 3.81 *c e*	1 3.38 *c e*	0.64	1 1.75 *b c e*	1 1.75 *c e*	1 3.58 *b c e*
Cartage:						
Motor drivers	1 4.69 *c e* [3 4]	1 4.69 *c e* [3 4]	0.77	1 3.00 *c e*	1 5.50 *c e*	1 3.00 *c e*
Horse drivers (1 horse)	* [3]	* [3]	0.45	1 2.50 *e*	1 3.50 *e*	1 1.15 *c e*
Railways:						
Goods porters						
Permanent way labourers	0 11.75 *e*	0 11.75 *e*	0.45	0 11.52 *c e* [7]	0 11.52 *c e* [7]	0 10.69 *c e* [7]
	0 11.75 *e*	0 11.75 *e*	0.30	0 10.94 *c e* [7]	0 10.93 *c e* [7]	0 10.57 *c e* [7]
Q. *Local authorities:*						
Labourers (unsk.)	1 1.96 *e*	1 3.00	0.53	1 3.96 *e* [8]	1 5.45 *e* [8]	1 0.58 *e* [8]

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Structural iron workers:* in Great Britain, erectors. *Concrete workers:* in Great Britain, levellers. *Bakers:* in Dundalk, table hands. *Tram and bus drivers and conductors:* in Cork and Dundalk, bus employees only. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work.

[1] See supplementary information on p. 407. [3] Rates described as minima in collective agreements. [4] Average of rates fixed by co-operative societies and those of other employers. [6] Rates for motor drivers employed by railway companies: 1s. 2.25d. [6] Rates for horse drivers employed by railway companies: 1s. 0.50d. [6] Plus "tool money", 6d. per day. [7] Basic rates; subject to a reduction of 10 per cent. in the case of entrants to the service since 1 January 1928; in addition, these rates are subject for the staffs in genera lto a reduction of 1 ¼ or 7 ½ per cent., varying with the different railway companies. [8] Initial wage.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Italy						Latvia		Luxemburg
	Florence *b*	Genoa *b*	Milan *b*	Rome	Trieste *b*	Turin *b*	Riga		Luxemburg
	Rates						Rates	Earnings	Rates
	Lire	Lire	Lire	Lire	Lire	Lire	Lats	Lats	Frs.
C. *Mechanical engineering:*									
Fitters and turners	2.54	2.97 *c*	2.81	3.55	2.97 *c*	3.25 *d*	0.64 *d*	0.74 *d*	(6.00) *c*
Iron moulders	2.54 *b*	2.97 *b c*	3.52 *b*	3.20 *b*	2.64 *b*	3.65 *b*	0.64	0.86	(7.75) *c*
Patternmakers	3.33 *b*	3.39 *b*	*	*	3.41 *b*	*	0.67	0.81	(5.60) *c*
Labourers (unskilled)	2.06	2.24 *c*	2.29	2.40	2.20	2.30	0.45	0.54	4.44 [1]
E. *Building:*									
Bricklayers and masons	3.03	3.13 *c*	3.52	3.30 *c d*	3.69 *c*	3.39 *b c*	0.81	0.83	5.45 [1]
Structural iron workers	2.53	3.50	3.52	3.80	3.69 *c*	*	*	*	5.08 [2]
Concrete workers	3.08 *b*	3.20 *b c*	3.88 *b*	3.75 *b*	3.58	3.73 *b c*	*	*	5.45 [2]
Carpenters and joiners	3.09 *d*	3.40 *c*	3.35 *d*	3.80 *d*	3.74 *d c*	3.42 *d*	0.61 *d*	0.65 *d*	4.98 *d*
Painters	3.69	3.60 *c*	4.09	3.53 *c*	4.05 *c*	4.05 *c*	0.59	0.57	5.40
Plumbers	3.20	3.00	4.00 *c*	3.60	4.62	3.69 *c*	0.71	0.74	5.00
Electrical fitters	3.82 *c*	3.39	2.86 *c*	4.90	4.50	3.58	0.56	0.64	5.25
Labourers (unskilled)	2.15	2.50 *c*	2.22	2.85	2.64	2.31	0.50	0.53	4.40 [3]
F. *Furniture making:*									
Cabinet makers	3.25	3.86	3.63	3.58 *c*	3.53 *c*	3.25	0.61	0.68	*
Upholsterers	3.35	3.52	3.28	4.25	3.78 *c*	3.25	0.62	0.71	*
French polishers	2.80	3.52	2.76	3.40	3.53 *c*	3.25	0.61	0.68	*
G. *Printing and bookbinding:*									
Hand compositors (Book and job)	3.95	4.03 *c*	4.55 *c*	4.05	4.49 *c*	4.56	0.83	0.88	6.25 [3]
Machine compositors (Book and job)	4.45 *b*	4.55 *b*	4.85 *b*	4.25 *b*	5.36 *b*	4.96 *b*	1.17	1.51	7.00 [4]
Machine minders	3.95	4.03 *c*	4.72 *c*	4.05	4.49 *c*	4.68	1.01	1.03	6.25 [4]
Bookbinders	3.95	4.03 *c*	4.51 *c*	3.43 *c*	4.31 *c*	4.52	0.90	0.90	5.75 [4]
Labourers (unskilled)	2.52	3.10	3.48	2.65	2.96	2.74	0.55	0.57	5.00 [4]
L. *Food Industry:*									
Bakers	3.92 *b*	3.75 *b*	3.90 *b*	3.40 *b*	3.83 *b*	3.83 *b*	0.67	0.77	*
M. *Electric power distribution:*									
Electrical fitters	*	3.56	*	*	4.21	3.40	*	0.62	5.97
Labourers (unskilled)	*	2.78	*	1.60	3.34	2.35	0.48	0.46	5.00
N. *Transport:*									
Trams and buses:									
Drivers	2.52	4.14 *c*	3.54 *c*	*	3.47 *c*	3.52 *c*	0.65 *f*	*	5.00 *b* [5]
Conductors	2.25	3.43 *c*	3.22 *c*	*	3.04	3.31 *c*	0.65 *f*	*	5.00 *b* [5]
Cartage:									
Motor drivers	2.52	2.75	2.80 *c*	3.93 *c*	3.11	2.63 *c*	0.69 *f*	*	*
Horse drivers (Hours)	2.38	2.30 *b*	*	[1]	2.11	2.33 *c*	0.45 *f*	*	*
Railways:									
Goods porters	2.55	2.20	2.35	*	2.49	2.15 *c*	*	*	4.50
Permanent way labourers	2.25	3.67	2.70	3.75	3.34 *c*	3.55	0.44	*	4.50
Q. *Local authorities:*									
Labourers (unskilled)	2.32 *c*	*	3.10	2.55	2.89	2.10	0.47	0.55	5.00

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Skilled occupations in mechanical engineering, building, furniture making, printing and bookbinding:* at Florence, Genoa, Milan, Trieste and Turin, workers described as "specialised", "skilled", "experienced", "first category" or "second category", according to the town concerned. *Iron moulders:* in Italy, sand moulders. *Patternmakers:* in Italy, tracers. *Bricklayers and masons:* in Turin, masons only. *Concrete workers:* in Turin, stucco makers; in Florence, Genoa, Milan, Rome, cement-makers. *Machine compositors (printing);* in Florence monotype operators; in Genoa, Milan and Trieste, linotype operators; in Turin, linotype and monotype operators. *Bakers:* in Florence and Rome, ovenmen and table hands; in Genoa, Milan, Trieste, and Turin, table hands. *Tram and bus drivers and conductors:* in Luxemburg, tram drivers and conductors only. *Horse drivers:* in Genoa, sand-cart drivers. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work. (*f*) Average calculated on the basis of monthly or yearly wages, divided by total normal hours of work.

[1] Lire 6.50 per day, plus a percentage on the takings (from 12 to 45 per cent.). [2] Minimum time rates of wages, fixed by collective agreements. [3] Rates after 3 years' service, Frs. 5.48. [4] Bus operators (one-man), Frs. 5.97.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Norway		New Zealand	Palestine	Netherlands				
	Oslo		Wellington	3 Towns [1]	Amsterdam		The Hague	Rotterdam	
	Rates	Earnings	Rates	Rates	Rates	Earnings	Rates	Rates	Earnings
	Kr.	Kr.	s. d.	Mils.	Fl.	Fl.	Fl.	Fl.	Fl.
C. *Mechanical engineering:*									
Fitters and turners	1.43 *b* [1]	1.68 *b*	2 6	46.7 *d*	(0.65)	0.76	*	(0.58)	0.68
Iron moulders	1.43 *b* [1]	1.68 *b*	2 6	46.6	(0.65)	0.76	*	(0.58)	0.68
Patternmakers	1.43 *b* [1]	1.68 *b*	2 7	*	(0.65)	0.76	*	(0.54)	0.64
Labourers (unsk.)	1.16 [1]	1.29	2 2.50	*	(0.50)	0.60	*	(0.49)	0.59
E. *Building:*									
Bricklayers and masons	1.77	*	2 10.50	71.9	0.66	0.64	0.66	0.64	0.61
Structural iron workers	*	*	2 5.75	56.9	(0.58)	0.69	*	(0.54)	0.64
Concrete workers	1.72	*	2 4.50	*	0.66	0.61	0.66	0.64	0.61
Carpenters and joiners	1.72	*	2 9.75	43.5	0.66	0.65	0.66	0.64	0.60
Painters	1.77	*	2 9	46.4	0.62	*	0.62	0.60	*
Plumbers	1.51 [1]	*	2 9	*	0.67	*	0.67	0.67	*
Electrical fitters	1.85 *b*	2.13	2 9	*	0.76	*	0.75	0.73	*
Labourers (unsk.)	1.67	*	2 4	40.8	0.61	*	0.61	0.58	*
F. *Furniture making:*									
Cabinet makers	1.76 *b* [1]	*	2 9	43.5	0.62 (0.62)	*	0.62	0.62	*
Upholsterers	1.82 *b* [1]	*	2 9	*	0.62 (0.62)	*	0.62	0.62	*
French polishers	1.76 *b* [1]	*	2 9	37.5	0.58	*	0.58	0.58	*
G. *Printing and bookbinding:*									
Hand compositors (Book and job)	1.67 *b c e* [1]	*	2 8.25 *e*	55.7	0.65	*	0.63	0.63	*
Machine compositors (Book and job)	2.04 *b c e* [1]	*	2 10.50 *e*	85.7	0.72	*	0.70	0.70	*
Machine minders	*	*	2 8.25 *e*	56.9	0.65	*	0.63	0.63	*
Bookbinders	1.58 *b e* [1]	*	2 8.25 *e*	41.4	0.65	*	0.63	0.63	*
Labourers (unsk.)	1.28 *b e* [1]	*	2 1.50 *e*	*	0.53	*	0.51	0.51	*
L. *Food industry:*									
Bakers	1.75 *c e*	*	2 7.36 *e*	61.1	0.58 *e*	*	0.58	0.58 *e*	*
M. *Electric power distribution:*									
Electrical fitters	*	*	2 9	*	0.59	0.65	0.57 *c*	0.60 *c e*	*
Labourers (unsk.)	*	*	2 4	*	0.56	0.62	0.51 *c*	0.51 *c e*	*
N. *Transport:*									
Trams and buses:									
Drivers	2.07 *b e*	*	2 5	*	0.60 *d*	0.67	0.53*cd*	0.55 *c e*	*
Conductors	*	*	2 3	*	0.56	0.64	0.50 *c*	0.51 *c e*	*
Cartage:									
Motor drivers	1.67 *c e*	*	2 0.82 *e*	*	0.39 *c*	*	0.37 *c*	0.37 *c e*	*
Horse drivers (1 horse)	*	*	2 0 *e*	*	0.39 *c*	*	0.37 *c*	0.37 *c e*	*
Railways:									
Goods porters	*	*	2 3.50	*	0.38 *c*	*	0.39 *c*	0.38 *c f*	*
Permanent way labourers	*	*	2 3.50	*	0.42 *c*	*	0.39 *c*	0.43 *c f*	*
Q. *Local authorities:*									
Labourers (unsk.)	1.63 *e*	*	2 4	*	0.52 *c*	0.59 *c*	0.50 *c*	0.46 *c e*	*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Fitters and turners, iron moulders, patternmakers:* in Oslo, skilled mechanical engineering workers in general. *Electrical fitters (building):* in Oslo, workers in their second year of service. *Cabinet makers and french polishers:* in Oslo, workers with 4 years' service. *Upholsterers:* in Oslo, workers with 3 years' service. *Hand and machine compositors (printing):* in Oslo, workers with more than two years' service; for day work. *Bookbinders and unskilled labourers (printing):* in Oslo, bookbinders and helpers in bookbinding in their second year of service. *Tram and bus drivers and conductors:* in Oslo, buses generally served by one man only. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work. (*f*) Average calculated on the basis of yearly or monthly wages, divided by total normal hours of work.

[1] Minimum time rates of wages, fixed by collective agreements. These rates are markedly lower than the rates actually in force. [2] Haifa, Jerusalem and Tel-Aviv.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Netherlands (*cont.*)		Poland				Rumania			
	Utrecht		Katowitz	Lodz	Poznan	Warsaw	Bucharest	Cernauti	Chisinau	Timisoara
	Rates	Earnings	Earnings				Rates			
	Fl.	Fl.	Zl.	Zl.	Zl.	Zl.	Lei	Lei	Lei	Lei
C. *Mechanical engineering:*										
Fitters and turners	(0.58)	0.66	1.01	0.96	0.93	1.40	16	10	15	22.50
Iron moulders	(0.58)	0.66	1.15	1.20	0.88	1.48	20	11	17.50	27
Patternmakers	(0.58)	0.66	1.20	1.05	0.91	*	14	11	15	21
Labourers (unsk.)	(0.45)	0.49	0.75	0.64	0.77	0.85	9	7	7	12
E. *Building:*										
Bricklayers and masons	0.62	*	1.11	1.26	0.84	1.47	20	14	19	20
Structural iron workers	(0.50)	0.57	*	*	*	*	12	13	32.50	22
Concrete workers	0.62	*	*	*	*	*	20	9	20	24
Carpenters and joiners	0.62	*	1.07	1.11	0.74	1.06	17	16	16	19
Painters	0.62	*	*	0.93	*	1.03	17	11	22.50	21
Plumbers	0.63	*	*	*	*	*	*	12	20	23
Electrical fitters	*	0.60	1.14	*	*	*	12	12	15	17
Labourers (unsk.)	0.57	*	0.66	0.69	0.55	0.79	9	7.50	8.50	11
F. *Furniture making:*										
Cabinet makers	0.60	*	0.99	0.81	0.67	0.92	15	13	16.50	18
Upholsterers	0.60	*	*	*	*	*	15	9	8	18
French polishers	0.55	*	*	0.67	*	*	8	12	7.50	12
G. *Printing and bookbinding:*										
Hand compositors (Book and job)	0.55	*	1.57	1.30	1.35	1.62	11	20	12	21
Machine compositors (Book and job)	0.62	*	2.04	2.23	1.78	2.93	10	20	*	23
Machine minders	0.55	*	1.54	1.27	1.42	1.85	8	23	16	23
Bookbinders	0.56	*	*	0.69	1.15	0.99	8	16	10	21
Labourers (unsk.)	0.44	*	0.62	0.56	0.58	0.77	5	12.50	8	12
L. *Food industry:*										
Bakers	*	0.60	*	0.87	0.68	1.35	14	12	*	15
M. *Electric power distribution:*										
Electrical fitters	0.65	0.67	1.36	*	1.27	2.03	13	34	13.50	27
Labourers (unsk.)	0.57	0.59	1.29	1.22	0.92	1.12	8	18	7	13
N. *Transport:*										
Trams and buses:										
Drivers	0.65 *b*	0.66 *b*	1.38 *b*	1.33 *b*	1.06	1.54	16	25	10	13.50
Conductors	0.65 *b*	0.66 *b*	1.34 *b*	1.18 *b*	0.98	1.52	16	25	7	11
Cartage:										
Motor drivers	0.47	*	*	*	*	*	8	33	12	13.50
Horse drivers (1 horse)	*	*	1.00 *b*	*	0.91 *b*	1.49 *b*	7	6	10	9
Railways:										
Goods porters	0.44 *c*	*	0.61 *c*	0.56 *c*	0.56 *c*	0.65 *c*	9	5	5	11
Permanent way labourers	0.44 *c*	*	0.61 *c*	0.56 *c*	0.56 *c*	0.65 *c*	10	5	5	11
Q. *Local authorities:*										
Labourers (unsk.)	0.56	0.57	0.83	0.85 *b*	0.88	0.89	10	7	7	11

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Tram and bus drivers and conductors:* in Utrecht, bus operators (one-man): in Katowitz, a married worker with two children; in Lodz, commencing wage for a permanent worker. *Horse drivers:* at Katowitz and Poznan, workers in the municipal service; at Warsaw, a permanent worker in the municipal service, married and with 2 children. *Local authorities' labourers:* at Lodz and Warsaw, permanent workers, married and with two children. (*c*) Average of two or more figures.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Sweden						Switzerland		
	Göteborg		Malmö		Stockholm		Basle	Berne	Zurich
	Rates	Earnings	Rates	Earnings	Rates	Earnings	Rates		
	Kr.	Kr.	Kr.	Kr.	Kr.	Kr.	Frs.	Frs.	Frs.
C. *Mechanical engineering:*									
Fitters and turners	0.90	1.56	0.88 [1]	1.49	0.96 [1]	1.79	1.75 *b c*	1.71 *b c*	1.71 *b c*
Iron moulders	0.90 [1]	1.66	0.88 [1]	1.45	0.96 [1]	1.82	*	*	*
Patternmakers	0.90 [1]	1.63	0.88 [1]	1.41	0.96 [1]	1.75	*	*	*
Labourers (unskilled)	0.77 [1]	1.37	0.75 [1]	1.23	0.84 [1]	1.38	1.22 *b*	1.18 *b*	1.18 *b*
E. *Building:*									
Bricklayers and masons	1.50	2.37	1.40	2.13	1.65	3.34	1.69 [2]	1.69 [2]	1.69 [2]
Structural iron workers	1.50 [1]	1.78	1.35 [1]	1.68	1.60 [1]	2.01	*	*	*
Concrete workers	1.36	*	1.27	*	1.50	2.92	*	*	*
Carpenters and joiners	1.50	2.28	1.40	2.15	1.65	3.12	1.70 *b* [2]	1.71 *b* [2]	1.71 *b* [1]
Painters	1.73	1.87	1.55	1.88	1.85	2.84	1.79 *b* [1]	1.75 *b* [1]	1.70 *b* [1]
Plumbers	1.45 [1]	2.15	1.36 [1]	2.02	1.57 [1]	2.58	1.49 *b* [1]	1.70 *b* [1]	1.45 *b* [1]
Electrical fitters	1.45	1.68	1.38	1.73	1.58	2.04	1.63 *b* [1]	1.60 *c* [1]	1.75 *b* [1]
Labourers (unskilled)	1.36	1.70	1.27	1.58	1.50	1.99	1.35 [2]	1.35 [2]	1.35 [2]
F. *Furniture making:*									
Cabinet makers	1.51 [1]	1.35	1.06 [1]	1.30	1.26 [1]	1.65	1.69 [2]	1.75 [2]	1.86 [2]
Upholsterers	1.48 [1]	1.60	1.41 [1]	1.54	1.55 [1]	1.83	*	*	1.86 [2]
French polishers	1.15 [1]	1.35	1.06 [1]	1.30	1.26 [1]	1.65	*	*	*
G. *Printing and book-binding:*									
Hand compositors / Machine compositors } Book and job	1.48 [1] / 1.62 [1]	1.71 / 1.89	1.42 [1] / 1.55 [1]	1.59 / 1.74	1.52 [1] / 1.67 [1]	1.84 / 2.08	1.73 *b e* [1] / 2.11 *b e* [1]	1.90 *b c* [1] / 2.30 *b e* [1]	1.90 *b e* [1] / 2.30 *b e* [1]
Machine minders	1.48 [1]	1.76	1.42 [1]	1.63	1.52 [1]	1.83	1.73 *b e* [1]	1.90 *b e* [1]	1.90 *b e* [1]
Bookbinders	1.36 [1]	1.55	1.30 [1]	1.63	1.40 [1]	1.78	1.46 *b e* [1]	1.54 *b e* [1]	1.50 *b* [1]
Labourers (unskilled)	1.40 [1]	1.53	1.35 [1]	1.47	1.45 [1]	1.59	0.94 *b e* [1]	1.04 *b e* [1]	1.00 *b* [1]
L. *Food Industry:*									
Bakers	1.44	1.57	1.67	1.79	1.52	1.64	2.01 *b c e*	1.79 *b c e*	1.86 *b c e*
M. *Electric power distribution:*									
Electrical fitters	1.41	1.77	*	1.82	1.49	1.98	2.04 *c f*	2.26 *c f*	1.93 *b c f*
Labourers (unskilled)	1.26	*	1.17	*	1.31	1.56	1.80 *c f*	2.00 *c f*	1.68 *b c f*
N. *Transport:*									
Trams and buses:									
Drivers	*	1.77 *b*	*	1.66 *b*	*	2.03 *b*	2.14 *c f*	2.31 *c f*	1.99 *b c f*
Conductors	*	1.77 *b*	*	1.66 *b*	*	2.03 *b*	2.14 *c f*	2.31 *c f*	1.96 *b c f*
Cartage:									
Motor drivers	1.40	1.45	1.33	1.35	1.54	1.57	1.52 *b e* [1]	1.35 *b e* [1]	1.75 *b e* [1]
Horse drivers (1 horse)	1.12	1.18	1.21	1.23	1.42	1.45	1.35 *b e* [1]	1.35 *b e* [1]	1.57 *b e* [1]
Railways:									
Goods porters	*	1.64	*	1.59	*	1.76	1.32 *b c f*	1.46 *b c f*	1.41 *b c*
Permanent way labourers	1.32	1.72	1.21	1.33	1.37	1.67	1.32 *b c f*	1.46 *b c f*	1.41 *b c*
Q. *Local authorities:*									
Labourers (unskilled)	1.26	1.75	1.17	1.43	1.31	2.13	1.80 *c f*	2.11 *c f*	1.68 *b c f*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Fitters and turners, labourers (unskilled) (mechanical engineering):* in Switzerland, workers employed in the central heating industry. *Carpenters and joiners:* in Switzerland, carpenters only. *Painters:* in Basle and Berne, workers in their third year after apprenticeship. *Plumbers*: in Basle and Zurich workers in their second year after apprenticeship and in Berne in their fourth year after apprenticeship. *Electrical fitters (building):* in Basle and Zurich, workers in their fourth year after apprenticeship. *Hand and machine compositors and machine minders (printing):* in Switzerland, married workers with more than two years' service. *Bookbinders, labourers (unskilled) (printing):* in Switzerland, workers in bookbinding workshops in their third year after apprenticeship. *Bakers:* in Switzerland, workers employed in large undertakings. *Electrical fitters and labourers (unskilled) (electric power distribution):* in Zurich, married workers. *Tram and bus drivers and conductors:* in Sweden, tram drivers and conductors only; in Zurich, married workers. *Motor drivers and horse drivers (cartage):* in Basle, workers in their second year, in Berne in their fifth year, and in Zurich in their third year after apprenticeship. *Railway goods porters and permanent way labourers:* in Switzerland, married workers. *Labourers (unskilled) (local authorities):* in Zurich, married workers. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work. (*f*) Average calculated on the basis of monthly or yearly wages, divided by total normal hours of work.

[1] Minimum time rates of wages, generally fixed by collective agreements. [2] Average of the rates per undertaking.

TABLE I. WAGES PER HOUR OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*concluded*)

Industry and occupation (with code letter)	Newfoundland	Union of South Africa		Yugoslavia		
	St. John's	Cape Town	Johannesburg	Belgrade	Ljubljana	Zagreb
	Rates	Rates		Earnings		
C. *Mechanical engineering:*	$	s. d.	s. d.	Dinars	Dinars	Dinars
Fitters and turners	0.43 *c*	2 9	2 9	6.20	8	9
Iron moulders	0.51	2 9	2 9	6.00	8	9.25
Patternmakers	0.45 *c*	2 9	2 9	7.50	8	8
Labourers (unsk.)	0.27 *c*	0 7.50 [2]	0 5 [2]	3	4	4.50
E. *Building:*						
Bricklayers and masons	0.55 *c*	3 2	3 6	5	5.50	7.75
Structural iron workers	0.60	3 2	3 6	6.75	7	6.75
Concrete workers	0.32 *c*	3 2	3 6	2.75	3	5.75
Carpenters and joiners	0.43 *c*	3 2	3 6	5	5.50	7.25
Painters	0.50	2 6	3 4	7.25	6	7.50
Plumbers	0.55 *c*	3 2	3 6	5	7	7.25
Electrical fitters	0.60	3 2	3 6	4.75	7	7.50
Labourers (unsk.)	0.30 *c*	0 9 [2]	0 5.50 [2]	3	7	4.12
F. *Furniture making:*						
Cabinet makers	0.40	2 5	2 9.13 *b*	5	6	6.50
Upholsterers	0.47 *c*	2 5	2 9.13 *b*	5	6	9.00
French polishers	0.40	2 5	2 9.13 *b*	3.85	8	5.25
G. *Printing and bookbinding:*						
Hand compositors (Book and job)	0.48 *c e*	2 7 *e*	3 0.26 *e*	7	13	7.84 *c*
Machine compositors (Book and job)	0.57 *c e*	3 0.49 *e*	3 6.63 *e*	7.50	15	9.85 *c*
Machine minders	0.59 *b c e*	2 7 *e*	3 0.26 *e*	7.50	15	15
Bookbinders	0.49 *c e*	2 7 *e*	3 0.26 *e*	6.50	8	11.88
Labourers (unsk.)	0.23 *c e*	*	*	4.50	7	5.40
L. *Food industry:*						
Bakers	0.35 *c e*	1 9 *e*	2 1 *e*	3	3.50	8
M. *Electric power distribution:*						
Electrical fitters	0.40 *c*	2 9	3 3	7	7	12.25
Labourers (unsk.)	0.30 *c*	*	*	3.85	4	4.50
N. *Transport:*						
Trams and buses:						
Drivers	0.48 *b*	2 1 *b*	2 8.50	6	6	6.50
Conductors	0.48 *b*	2 0 *b*	2 8.50 *b e* [1]	6	6	6.25
Cartage:						
Motor drivers	0.41 *c*	1 2.4 *b e*	1 4.15 *b e*	6	3.50	6.40
Horse drivers (1 horse)	0.41 *c e*	*	*	8.75	3.30	6.50
Railways:						
Goods porters	0.36	*	*	7.20	4	5.50
Permanent way labourers	0.29	*	*	*	3.30	2.50
Q. *Local authorities:*						
Labourers (unsk.)	0.30	*	*	3.25	4	4

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: *Furniture making:* in Johannesburg, first-class workers. *Machine minders (printing):* in St. John's, pressmen. *Tram and bus drivers and conductors:* in St. John's, tram operators (one-man) only; in Cape Town and Johannesburg, workers after 4 years' service. *Motor drivers:* in Cape Town and Johannesburg, drivers of lorries of from one to three tons. (*c*) Average of two or more figures. (*d*) Average of figures for the two occupations indicated. (*e*) Average calculated on the basis of daily or weekly wages, divided by normal hours of work.

[1] Rates for tram conductors. Rates for bus conductors 2s. 3.50d. after 4 years' service. [2] Rates for coloured workers principally.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*)

Industry and occupation (with code letter)	Argentina	Australia		Belgium	Canada			
	Buenos Aires	Melbourne	Sydney	Brussels	Halifax	Montreal	Ottawa	Toronto
C. *Mechanical engineering:*								
Fitters and turners	44	44	44	48	44 *b*	44-50 *b*	44-50 *b*	40-50 *b*
Iron moulders	44	44	44	48	44	44-50	44-50	40-50
Patternmakers	44	44	44	48	44	44-50	44-50	40-50
Labourers (unsk.)	44	44	44	48	44	44-55	44-50	44-50
E. *Building:*								
Bricklayers and masons	44	44	44	48	44	44	44	40
Structural iron workers	44	*	*	48	44	44	44	40
Concrete workers	44	44	44	48	44-48	44	44	40-48
Carpenters and joiners	44	44	44	48	44	44	44	40
Painters	44	44	44	48	44	44	44	40
Plumbers	40	44	44	48	44	44	44	40
Electrical fitters	44	44	44	48	44	44	44	40
Labourers (unsk.)	44	44	44	48	44-48	44	44-50	40-48
F. *Furniture making:*								
Cabinet makers	40	44	44	48	*	44-48	49-54	44-48
Upholsterers	40	44	44	48	*	44-48	49-54	44-48
French polishers	40	44	44	48	*	44-48	49-54	44-48
G. *Printing and bookbinding:*								
Hand compositors (Book and job)	36 *b*	44	44	48	42-48	45	45-48	40-48
Machine compositors (Book and job)	36 *b*	44	44	48	42-48	45	45-48	40-48
Machine minders	44	44	44	48	44-48 *b*	45 *b*	45-48 *b*	40-48 *b*
Bookbinders	44	44	44	48	44-48	45	45-48	40-48
Labourers (unsk.)	44	44	44	48	*	*	*	*
L. *Food industry:*								
Bakers	48 [1]	44 *b*	44 *b*	48	48	48	56	54
M. *Electric power distribution:*								
Electrical fitters	48	48 *b*	44 *b*	48	44	44	48	40
Labourers (unsk.)	48	48	44	48	44	48	48	40
N. *Transport:*								
Trams and buses:								
Drivers	48	48	44	48	53 *b*	54 *b*	49.5 *b*	48 *b*
Conductors	48	48	44	48	*	54 *b*	*	48 *b*
Cartage:								
Motor drivers	44	48	44	48	44-54	48-60	44-54	48-60
Horse drivers (1 horse)	*	48	44	48	44-54	48-60	50-60	48-60
Railways:								
Goods porters	*	48	44	48	48 *b*	48 *b*	48 *b*	48 *b*
Permanent way labourers	*	48	44	48	48	48	48	48
Q. *Local authorities:*								
Labourers (unsk.)	44	48	44	48	48	44	44	44

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] Night work 42 hours.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Canada (*cont.*)		Chile	Colombia	Denmark	Estonia	United States		
	Vancouver	Winnipeg	Santiago	Bogotá	Copenhagen	Tallinn, Tartu	Baltimore	Boston	Chicago
C. *Mechanical engineering:*									
Fitters and turners	44 *b*	40-50 *b*	48	48	48	48	*	*	*
Iron moulders	40-44	40-50	48	48	48	48	*	*	*
Patternmakers	44	40-50	48	48	48	48	*	*	*
Labourers (unsk.)	44	40-50	48	48	48	48	*	*	*
E. *Building:*									
Bricklayers and masons	40	44	48	48	48 [1]	48	40	40	40
Structural iron workers	40	44	48	48	*	48	40	40	40
Concrete workers	40-44	44-48	48	48	*	48	40 *b*	40 *b*	40 *b*
Carpenters and joiners	40-44	44	48	48	48 [1]	48	40	40	40
Painters	40-44	44	48	48	48	48	40	40	30
Plumbers	40	44	48	48	48	48	40	40	44
Electrical fitters	40-44	44	48	48	48	48	40 *b*	40 *b*	40 *b*
Labourers (unsk.)	40-44	44-48	48	48	48 [1]	48	44	40	40
F. *Furniture making:*									
Cabinet makers	44	44-48	48	48	48	48	*	*	*
Upholsterers	44	44-48	48	48	48	48	*	*	*
French polishers	44	*	48	48	*	48	*	*	*
G. *Printing and bookbinding:*									
Hand compositors (Book and job)	44-48	44-48	48	48	48	48	40	40	40
Machine compositors (Book and job)	44-48	44-48	48	48	48	48	40	40	40
Machine minders	44-48 *b*	44-48 *b*	48	*	48	48	40	40	40
Bookbinders	44-48	44-48	48	48	48	48	*	40	44
Labourers (unsk.)	*	*	48	48	48	48	*	*	*
L. *Food industry:*									
Bakers	48	52	48	48	48	48	48 *b*	48 *b*	40
M. *Electric power distribution:*									
Electrical fitters	40	48	48	48	*	48	*	*	*
Labourers (unsk.)	40	44	48	48	*	48	*	*	*
N. *Transport:*									
Trams and buses:									
Drivers	48 *b*	42 *b*	48	48	48	48	*	*	*
Conductors	48 *b*	42 *b*	48	48	48	48	*	*	*
Cartage:									
Motor drivers	44-40	44-54	48	48	48	48	*	*	*
Horse drivers (1 horse)	*	*	48	48	54-57	48	*	*	*
Railways:									
Goods porters	48 *b*	48 *b*	48	48	*	48	*	*	*
Permanent way labourers	48	48	48	48	*	*	*	*	*
Q. *Local authorities:*									
Labourers (unsk.)	40	40-48	48	48	48	48	*	*	*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] 42 hours during certain winter months.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	United States (*cont.*)							France				
	Denver	Los Angeles	New Orleans	New York	Philadelphia	St. Louis	San Francisco	Bordeaux	Lille	Lyons	Nancy	Paris
C. *Mechanical engineering:*												
Fitters and turners	*	*	*	*	*	*	*	40	40	40 *b*	40	40
Iron moulders	*	*	*	*	*	*	*	40	40	40 *b*	40 *b*	*
Patternmakers	*	*	*	*	*	*	*	40	40	40 *b*	40	*
Labourers (unsk.)	*	*	*	*	*	*	*	40	40	40 *b*	40	40
E. *Building:*												
Bricklayers and masons	35	40	40	35	35	40	30	40	40	40	40	40 *b*
Structural iron workers	35	40	40	40	40	40	40	40	40	40 *b*	40	*
Concrete workers	35 *b*	40 *b*	44 *b*	35 *b*	40 *b*	40 *b*	40 *b*	40	40	40 *b*	40	*
Carpenters and joiners	35	40	40	35	40	40	40	40	40	40	40	40
Painters	35	40	44	35	40	40	35	40	40	40	40	40
Plumbers	35	40	40	30-35	35	40	40	40	40	40 *b*	40	40
Electrical fitters	35 *b*	40 *b*	40 *b*	30 *b*	40 *b*	40 *b*	40 *b*	40	40	40	40	40
Labourers (unsk.)	35	44	44	35-40	44	40	40	40	40	40 *b*	40	*
F. *Furniture making:*												
Cabinet makers	*	*	*	*	*	*	*	40	40	*	40	40
Upholsterers	*	*	*	*	*	*	*	40	40 *b*	*	40	*
French polishers	*	*	*	*	*	*	*	40	40 *b*	*	40	*
G. *Printing and bookbinding:*												
Hand compositors (Book and job)	40	40	40	40	40	40	40	40	40	40	40	*
Machine compositors (Book and job)	40	40	40	40	40	40	40	40	36-38	40	40	40
Machine minders	40 *b*	40	*	40	40	40	40 *b*	40	40 [1]	40	40	*
Bookbinders	44	40	40	40	40	40	40	40	40	*	40	40
Labourers (unsk.)	*	*	*	*	*	*	*	40	40	*	40	*
L. *Food industry:*												
Bakers	40	40	*	40 *b*	40 *b*	40	36	*	40	40 *b*	48-54 *b*	*
M. *Electric power distribution:*												
Electrical fitters	*	*	*	*	*	*	*	40	40	*	40	*
Labourers (unsk.)	*	*	*	*	*	*	*	40	40	*	40	*
N. *Transport:*												
Trams and buses:												
Drivers	*	*	*	*	*	*	*	40	40	40 *b*	40 *b*	*
Conductors	*	*	*	*	*	*	*	40	40	40 *b*	40 *b*	*
Cartage:												
Motor drivers	*	*	*	*	*	*	*	40	45	*	40	*
Horse drivers (1 horse)	*	*	*	*	*	*	*	40	45	*	40	*
Railways:												
Goods porters	*	*	*	*	*	*	*	*	40	*	40	*
Permanent way labourers	*	*	*	*	*	*	*	40 *b*	40	*	40	*
												8
Q. *Local authorities:*												
Labourers (unsk.)	*	*	*	*	*	*	*	40	40	40	40	*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] Rotative machine minders, 36 hours.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Great Britain							Hungary	Ireland		
	Birmingham	Bristol	Glasgow	Leeds	London	Manchester	Newcastle	Budapest	Cork	Dublin	Dundalk
C. *Mechanical engineering:*											
Fitters and turners	47	47	47	47	47	47	47	48	47	47	47
Iron moulders	47	47	47	47	47	47	47	45	47	47	47
Patternmakers	47	47	47	47	47	47	47	46	47	47	47
Labourers (unsk.)	47	47	47	47	47	47	47	47	47	47	47
E. *Building:*											
Bricklayers and masons	46.5 [1]	44 [2]	44 [4]	46.5 [1]	44	46.5 [1]	44	48	47	44	47
Structural iron workers	47 *b*	47 *b*	47 *b*	47 *b*	47 *b*	47 *b*	47 *b*	48	*	44-47	*
Concrete workers	48 *b* [3]	48 *b* [3]	48 *b* [3]	48 *b* [3]	48 *b* [3]	48 *b* [3]	48 *b* [3]	47	47	44	47
Carpenters and joiners	46.5 [1]	44 [2]	44 [4]	46.5 [1]	44	46.5 [1]	44	48	47	44	47
Painters	46.5 [1]	44 [2]	44 [4]	46.5 [1]	44	46.5 [1]	44	48	47	44	47
Plumbers	46.5 [1]	44 [2]	44 [4]	46.5 [1]	44	46.5 [1]	44	46	47	44	47
Electrical fitters	47.0	47	47	47	47	47	47	47	47	44	47
Labourers (unsk.)	46.5 [1]	44 [2]	44 [4]	46.5 [1]	44	46.5 [1]	44	48	47	44	47
F. *Furniture making:*											
Cabinet makers	47	47	47	44	47	46.5 [7]	44	48	47	44	44
Upholsterers	47	47	47	44	47	46.5 [7]	44	48	47	44	44
French polishers	47	47	47	44	47	46.5 [7]	44	48	47	44	44
G. *Printing and bookbinding:*											
Hand compositors (Book and job)	45	45	45	45	45	45	45	39	45	45	45
Machine compositors (Book and job)	45	45	45	45	45	45	45	37	45	45	45
Machine minders	45	45	45	45	45	45	45	41	45	45	45
Bookbinders	45	45	45	45	45	45	45	40	45	45	45
Labourers (unsk.)	45	45	45	45	45	45	45	38	47	45	*
L. *Food industry:*											
Bakers	48	*	*	48	48	48	48	48	48	44.5	47
M. *Electric power distribution:*											
Electrical fitters	47	47	47	47	47	47	47	47	47	44	47
Labourers (unsk.)	47	47	47	47	47	47	47	51	48	44	48
N. *Transport:*											
Trams and buses:											
Drivers	48	*	48	48	48	48	48	48	48 *b*	48	48 *b*
Conductors	48	*	48	48	48	48	48	48	48 *b*	48	48 *b*
Cartage:											
Motor drivers	48	48	48	48	48	48	48	52	48	48	47
Horse drivers (1 horse)	48	48	48	48	48	48	48	62	48	48	47
Railways:											
Goods porters	48	48	48	48	48	48	48	61	48	48	48
Permanent way labourers	48	48	48	48	48	48	48	47	48	48	48
Q. *Local authorities:*											
Labourers (unsk.)	47	48	48	47	47 [5]	47	47	49	47	44	48

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] 44 hours in winter. [2] 44.5 hours in winter; 49.5 in summer; average: 48 hours. [3] 41.5 during ten winter weeks. [4] 41.5 hours in December and January. [5] 39 hours in winter. [6] In the case of one of the local authorities of the County of London: 48 hours. [7] In 5-day workshops: 46 ¼ hours.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*cont.*)

Industry and occupation (with code letter)	Latvia	Luxemburg	Norway	New Zealand	Palestine	Netherlands				Poland	
	Riga	Luxemburg	Oslo	Wellington	3 Towns [4]	Amsterdam	The Hague	Rotterdam	Utrecht	Katowitz	Lodz
C. *Mechanical engineering:*											
Fitters and turners	46	48	48 *b*	40	48	48	*	48	48	48	46
Iron moulders	46	48	48 *b*	40	48	48	*	48	48	48	46
Patternmakers	46	48	48 *b*	40	*	48	*	48	48	48	46
Labourers (unsk.)	46	48	48	40	*	48	*	48	48	48	46
E. *Building:*											
Bricklayers and masons	46	48	48	40	48	48	48	48	48	48	46-48
Structural iron workers	*	48	*	40	48	48	*	48	48	48	46-48
Concrete workers	*	48	48	40	*	48	48	48	48	48	46-48
Carpenters and joiners	46	[1]	48	40	48	48	48	48	48	48	46-48
Painters	46	54	48	40	48	48	48	48	48	48	46-48
Plumbers	46	48-54	48	40	*	48	48	48	48	48	46-48
Electrical fitters	46	54	48 *b*	40	*	48	48	48	48	48	46-48
Labourers (unsk.)	46	48	48	40	48	48	48	48	48	48	46-48
F. *Furniture making:*											
Cabinet makers	46	*	48 *b*	40	48	48	48	48	48	48	46
Upholsterers	46	*	48 *b*	40	*	48	48	48	48	48	46
French polishers	46	*	48 *b*	40	48	48	48	48	48	48	46
G. *Printing and bookbinding:*											
Hand compositors (Book and job)	46	48	48 *b* [3]	40	46-48	48	48	48	48	46	46-48
Machine compositors (Book and job)	46	48	45 *b* [3]	40	46-48	48	48	48	48	46	46-48
Machine minders	46	48	*	40	46-48	48	48	48	48	46	46-48
Bookbinders	46	48	48 *b*	40	46-48	48	48	48	48	46	46-48
Labourers (unsk.)	46	48	48 *b*	40	*	48	48	48	48	46	46-48
L. *Food industry:*											
Bakers	48	*	48	44	48	48	48	48	48	*	48
M. *Electric power distribution:*											
Electrical fitters	46	48	*	40	*	48	48	48	46	48	*
Labourers (unsk.)	46	48	*	40	*	48	48	48	46	48	46-48
N. *Transport:*											
Trams and buses:											
Drivers	48	48	45 *b*	40	*	48	48	48	46 *b*	48 *b*	46 *b*
Conductors	48	48	*	40	*	48	48	48	46 *b*	48 *b*	46 *b*
Cartage:											
Motor drivers	48	*	48	44	*	55	55	55	55	*	*
Horse drivers (1 horse)	48	*	*	44	*	55	55	55	*	48 *b*	*
Railways:											
Goods porters	*	48	*	40	*	57	57	57	50	48	48
Permanent way labourers	46	48	*	40	*	52.5	57	51	50	48	48
Q. *Local authorities:*											
Labourers (unsk.)	46	48	48	40	*	48	48	48	46	48	46 *b*

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] Carpenters, 48 hours, joiners, 60 hours. [2] In the case of night work, 39 hours (36 hours in undertakings which do not belong to the Employers' Association). [3] In the case of night work, 36 hours (33 hours in undertakings which do not belong to the Employers' Association). [4] Haifa, Jerusalem and Tel-Aviv.

TABLE II. NUMBER OF NORMAL HOURS OF WORK PER WEEK OF ADULT MALE WORKERS IN VARIOUS OCCUPATIONS IN OCTOBER 1938 (*a*) (*concluded*)

Industry and occupation (with code letter)	Poland (*cont.*)		Rumania	Sweden	Switzerland	Newfoundland	Union of South Africa	Yugoslavia		
	Poznan	Warsaw	4 Towns [1]	Göteborg, Malmö, Stockholm	Basle, Berne, Zurich	St. John's	Cape Town Johannesburg	Belgrade	Ljubljana	Zagreb
C. *Mechanical engineering:*										
Fitters and turners	46	46	48	48	48 *b*	48-54	48	48-60	54	48
Iron moulders	46	46	48	48	*	48	48	48-60	48	48
Patternmakers	46	46	48	48	*	40-48	48	48-60	54	48
Labourers (unsk.)	46	46	48	48	48 *b*	40,54	48	48	60	48
E. *Building:*										
Bricklayers and masons	46-48	46	48	48	50 [5]	48-60	44	60	60	48
Structural iron workers	46-48	46	48	48	*	40	44	60	60	48
Concrete workers	46-48	46	48	48	*	40-60	44	60	60	48
Carpenters and joiners	46-48	46	48	48	50 *b* [6]	40-60	44	60	60	48
Painters	46-48	46	48	48 [4]	47,5 [5]	40-60	44	60	60	48
Plumbers	46-48	46	48	48	48	60	44	60	60	48
Electrical fitters	46-48	46	48	48	48	40	44	60	60	48
Labourers (unsk.)	46-48	46	48	48	50 [6]	40-60	44	60	60	48
F. *Furniture making:*										
Cabinet makers	46-48	46-48	48	48	48	48	48	48-60	60	60
Upholsterers	46-48	46-48	48	48	48 [7]	42-48	48	48-60	60	60
French polishers	46-48	46-48	48	48	*	48	48	48-60	60	60
G. *Printing and bookbinding:*										
Hand compositors (Book and job)	46	46-48	48	48	48	48	46 [8]	42-48	48	48-60
Machine compositors (Book and job)	46	46-48	48	48	44	48	43 [8]	42-48	48	48-60
Machine minders	46	46-48	48	48	48	48	46 [8]	48	48	48-60
Bookbinders	46	46-48	48	48	48	48	46 [8]	48	48	48-60
Labourers (unsk.)	46	46-48	48	48	48	48	*	48	48	48-60
L. *Food industry:*										
Bakers	46-48	48	48	48	48 *b*	48	48	60	48	48
M. *Electric power distribution:*										
Electrical fitters	46	46	48 [3]	48	48	40-54	48	48-60	60	48
Labourers (unsk.)	46	46	48 [3]	48	48	54	*	48-60	60	42
N. *Transport:*										
Trams and buses:										
Drivers	46	46	48	48	48	59 *b*	48 *b*	48	60	48
Conductors	46	46	48	48	48	59 *b*	49,5 *b* [9]	48	60	48
Cartage:										
Motor drivers	*	*	48	48	51	40-48	50 *b* [10]	*	60	60
Horse drivers (1 horse)	56 *b*	46 *b*	48 [3]	48	51	40-48	48-50	*	60	54
Railways:										
Goods porters	48	48	48	48	48	40	*	60	60	54
Permanent way labourers	48	48	48	48	48	40	*	*	60	48
Q. *Local authorities:*										
Labourers (unsk.	46	46	48	48	48	48	*	48-60	60	48

(*a*) See notes on the methods of compilation of these statistics on pp. 403 *et seq.* (*b*) Supplementary definitions for certain occupations: see notes to table I.

[1] Bucharest, Cernauti, Chisinau and Timisoara. [2] Chisinau, 47 hours. [3] Chisinau and Timisoara, 60 hours. [4] In Stockholm, 45 hours. [5] Summer hours. [6] Basle, 49 hours; summer hours. [7] Zurich only. [8] In case of night work, 40 hours. [9] In Johannesburg, 48 hours. [10] In Johannesburg, 52 hours.

NOTES ON THE METHODS OF COMPILATION OF THE WAGES AND HOURS OF WORK STATISTICS IN TABLES I AND II, INDICATED BY THE LETTER *a*

Argentina.

Rates : Weighted average of standard wage rates, fixed unilaterally by the employers, except for masons (contract rates), workers employed in furniture making, and local authorities' labourers (minimum rates).

Hours : Normal (maximum) statutory or contract hours of work.

Australia.

Rates : Minimum time rates of wages as fixed by arbitration awards, and which may be taken as representative of average earnings.

Hours : Normal hours of work as fixed by arbitration awards of the Court of Conciliation and Arbitration or by the Council of Industry of New South Wales, by Wages Councils, or by collective agreements in force.

Belgium.

Rates : Minimum time rates of wages, according to the scales in force or quoted by the official Employment Exchange in Brussels, as fixed by collective agreements in force or on the basis of employers' offers and of the rates stated on the certificates issued to persons involuntarily unemployed. For mechanical engineering and building, the figures are equivalent to the average wages actually paid in the majority of cases.

Hours : Normal statutory hours of work.

Canada.

Rates and Hours : Predominant time rates of wages and normal hours of work in force on 1 December 1938 ; for most of the occupations under the headings building and printing, and for transport, the figures given are trade union rates.

Chile.

Earnings : Average earnings per hour worked.

Hours : Normal statutory hours of work.

Colombia.

Earnings : Average earnings per hour worked.

Hours : Normal statutory hours of work.

Denmark.

Rates : Minimum time rates or "minimum payments" on time work (especially in mechanical engineering) fixed by collective agreements ; the rates actually paid are generally higher.

Earnings : Averages of earnings per hour on time and piece work.

Hours : Normal hours of work as fixed by collective agreements.

Estonia.

Rates : Medians of time rates of wages in July 1938, determined from individual contracts of employment (collective agreements being almost entirely lacking). Figures in brackets : averages of minimum rates guaranteed to piece workers.

Earnings : Medians of average earnings per normal hour of work of time and piece workers in July 1938.

Hours : Normal statutory hours of work.

United States.

Rates and Hours : Minimum time rates of wages and normal hours of work, fixed by trade unions or collective agreements, applicable to union members on 1 June 1938. These rates are regarded as representative for the whole year ; they are generally predominant rates of wages.

France.

Rates : Average time rates of wages, in accordance with collective agreements or other decisions in force, or based on information supplied by organisations of employers or workpeople. Figures in brackets : basic minimum time rates for piece workers.

Hours : Normal statutory hours of work.

Great Britain.

Rates and Hours : Time rates of wages and normal hours of work embodied in collective agreements or recognised by organisations of employers and workpeople, or usually in force, on 1 October 1938. However, in a certain number of cases (indicated by a special note) the rates are those described as minimum rates in collective agreements.

For mechanical engineering, the figures are based on comprehensive returns obtained from its members by the Engineering and Allied Employers' National Federation. The time rates quoted represent the predominant rates actually paid to men on plain time work, inclusive of basic rates and bonus of 20s. 0d. per week. The collective agreements in force in this industry provide that basic rates for piece work shall be such as will enable a workman of average ability to earn at least 25 per cent. over time rates, excluding " war bonus ".

Hungary.

Earnings : Weighted averages of normal hourly earnings for time work.

Hours : Normal hours of work.

Ireland.

Rates : Minimum time rates of wages fixed by collective agreements in force in November 1938. These are almost invariably typical or standard rates, except for trams in Dublin, which pay in many cases rates considerably higher than the minimum rates quoted.

Hours : Normal hours of work during the complete week.

Italy.

Rates : Minimum rates of wages for time and for piece work (including cost-of-living bonus and other allowances, if any) generally fixed by collective agreements in force at 1 January 1938.

Latvia.

Rates : Weighted arithmetic means of typical time rates of wages. For drivers and conductors of trams and buses and motor lorry and van drivers, figures for June 1938.

Earnings : Weighted arithmetic means of earnings per hour worked.

Hours : Normal statutory hours of work.

Luxemburg.

Rates : Standard rates generally fixed by collective agreements or determined by usage. However, in a certain number of cases (indicated by a special note) the figures represent minimum time rates fixed by collective agreements. Figures in brackets : averages of minimum rates guaranteed to piece workers.

Hours : Normal hours of work as fixed by collective agreements or determined by usage.

Norway.

Rates : Standard rates generally fixed by collective agreements, or average wages actually paid for time work. However, in a certain number of cases (indicated by a special note) the figures represent minimum time rates fixed by collective agreements.

Earnings : Average earnings per hour worked, for time and piece work, account being taken of payments for overtime worked.

For mechanical engineering, the figures given for both rates and earnings are the result of an enquiry undertaken by the Norwegian Iron and Metal Workers' Union, Oslo. The data concerning rates relate to all skilled workers and to all unskilled workers engaged in this branch of industry in February 1938 ; the data concerning earnings relate to the same groups during the year 1937. In accordance with a collective agreement dated April 1937, time rates of wages have been increased by 7.5 per cent. as from January 1938, according to Index Regulation.

Hours : Normal statutory hours of work.

New Zealand.

Rates : Minimum time rates of wages fixed by decisions of the Arbitration Court.

Hours : Normal hours of work, fixed by the Factories Act as amended in 1936 or by decisions of the Arbitration Court.

Palestine.

Rates : Average time rates of wages for European workers, established in accordance with employers' reports at the end of September 1938 and considered as basic rates.

Hours : Normal hours of work.

Netherlands.

Rates : Time rates of wages fixed by collective agreements, or by Government or local authorities, according to employers' regulations or the scales in force. Generally they are minimum rates, which may nevertheless be considered as representing in most cases the rates currently applied (except for electrical fitters in the building industry at Utrecht, where they are typical rates noted by the Employment Exchange).

For transport (trams and buses), electric power distribution, and local authorities' services in Amsterdam, averages for 1937.

Figures in brackets : in Amsterdam and Rotterdam : minimum hourly rates guaranteed to piece workers ; in Utrecht : indicatory basic time rates for piece work, according to employers' regulations. Further, the data for Amsterdam and Rotterdam relate to the first six months of 1938.

Earnings : Net average earnings per hour worked, for time and piece work ; the workers' compulsory insurance contributions are deducted, but account is taken of payments for overtime worked. For workers in mechanical engineering and for structural iron workers in Amsterdam and Rotterdam, averages for the first six months of 1938.

For bricklayers and masons, concrete workers, carpenters and joiners in Amsterdam and Rotterdam, figures obtained in the course of an enquiry extending over one week during the month of September 1938 and relating to workers of at least 21 years of age: while the rates for corresponding occupations relate to workers aged from 23 to 24 years.

Hours : Normal hours of work, fixed by legislative measures or regulations, or by collective agreements in force.

Poland.

Earnings : Average earnings per hour worked (time and piece work) in August 1938, in undertakings employing at least 20 workers.

For *transport* (cartage : horse drivers), railways, *local authorities*, and (at Katowitz and Lodz) trams and buses : rates of wages.

Hours : Normal statutory hours of work.

Rumania.

Rates : Time rates of wages fixed by collective agreements or based on transactions in the Public Employment Exchanges.

The data referring to Bucharest and Cernauti are typical rates of wages while in Chisinau and Timisoara they are the average between minimum and maximum rates of wages.

Hours : Normal statutory hours of work.

Sweden.

Rates : Typical or predominant time rates of wages. However, in a certain number of cases (indicated by a special note) the figures are minimum time rates of wages fixed by collective agreements.

Earnings : Average earnings per hour worked in 1937, for time and piece work, account being taken of the value of allowances in kind and payments for overtime.

Hours : Normal statutory hours of work.

Switzerland.

Rates and Hours : Predominant time rates of wages and normal hours of work fixed by collective agreements, regulations, or other agreements. However, in a certain number of cases (indicated by a special note) the figures are minimum time rates fixed by collective agreements.

Newfoundland.

Rates : Typical time rates of wages.

Hours : Normal hours of work as determined by usage, but practically fixed by collective agreements.

Union of South Africa.

Rates and Hours : Minimum time rates of wages and normal hours of work fixed by collective agreements, arbitration awards, legislative measures (Wage Board), or other regulations.

Yugoslavia.

Earnings : Average earnings per hour worked.

Hours : Normal hours of work, communicated by the Central Secretariat of the Chambers of Labour.

Supplementary Information on Wages

Great Britain.

AVERAGE HOURLY EARNINGS IN OCTOBER 1937

(including payments for overtime and night shifts and bonus payments, but excluding out-working and travelling allowances) [1]

Occupation	Birmingham district	Bristol district	North-West district (Clyde) (Glasgow)	Leeds district	London district	Manchester district	North-East Coast district (Newcastle)
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Fitters and turners (average) [2]:	1 6.87	1 7.79	1 6.62	1 5.09	1 8.05	1 5.60	1 6.29
Time work	1 10.56	2 0.02	1 8.94	1 7.04	1 11.57	1 8.60	1 9.01
Piece work							
Iron moulders:							
Time work	1 5.31	1 4.68	1 6.95	1 5.91	1 6.79	1 6.50	1 5.86
Piece work	1 10.02	1 8.67	1 10.54	1 8.07	1 9.49	1 8.31	1 9.39
Patternmakers:							
Time work	1 7.35	1 7.91	1 6.86	1 5.76	1 8.78	1 6.52	1 6.40
Piece work	1 10.69	1 9.84	2 0.34	1 7.57	1 9.40	1 9.54	1 8.88
Labourers:							
Time work	1 1.53	1 1.27	1 1.69	1 1.14	1 2.70	1 0.96	1 1.72
Piece work	1 4.76	1 4.12	1 3.32	1 2.78	1 5.06	1 3.09	1 3.75

[1] Information supplied by the Engineering and Allied Employers' National Federation.
[2] Unweighted average of earnings in the two occupations considered, calculated by the International Labour Office.

APPENDIX

Table A

Table A below gives the cost of a " basket of provisions " in the national currency in all countries and towns covered by the enquiry on retail prices. These figures are based on the prices of 14 foodstuffs, published or communicated by the competent national or municipal statistical services, as a result of the above-mentioned enquiry carried out in connection with the wage enquiry. [1] A certain weight (the same for all towns) has been attached to each item in computing the cost of the " basket of provisions ". The average cost of the " basket of provisions " in all the towns with under (or only slightly over) a million inhabitants has also been calculated.[2]

These figures are not offered as an exact and reliable measure of the cost of living in the various localities, but only as approximate indicators of the cost of living (in terms of foodstuffs), for the purpose of giving a very summary indication of the purchasing power of the wages given in the preceding statistics. To prevent any erroneous interpretation, their exact meaning and limitations may be recalled.

In the first place, they are based on the prices of important foodstuffs only, and express the purchasing power of the national currencies only over these foodstuffs. It may reasonably be admitted

[1] The detailed data on the prices of the different articles used for these calculations are published in the present number of the *Review*: " Retail Prices in Certain Countries in October 1938 ". For the composition of the basket of provisions, cf. *International Labour Review*, Vol. XXVII, No. 4, April 1933: " An International Comparison of the Retail Prices of Certain Important Foodstuffs, July 1929 to October 1932 ", p. 532.

[2] For the reasons for limiting the averages to these towns, see below; " Retail Prices in Certain Countries in October 1938 ", p. 411.

TABLE A. — COST OF THE "BASKET OF PROVISIONS" IN NATIONAL CURRENCIES, IN OCTOBER 1938 [1]

Country and town	Currency	Cost of the "basket of provisions"
Germany :		
Berlin	RM.	5.77
Vienna	,,	6.35 [2]
5 Towns	,,	5.73 [2]
Breslau	,,	5.20 [2]
Cologne	,,	6.12 [2]
Hamburg	,,	5.83
Leipzig	,,	5.66 [2]
Munich	,,	5.86 [2]
Argentina : Buenos Aires	Pesos	3.38
Australia : 2 towns :	Pence	95.8
Melbourne	,,	93.2
Sydney	,,	98.5
Belgium : Brussels	Fr.	46.36 [2]
Bulgaria : 2 towns :	Leva	112.79
Plovdiv	,,	112.55
Sofia	,,	113.03
Canada : 6 towns :	Cents	178.4
Halifax	,,	171.4
Montreal	,,	168.5
Ottawa	,,	177.3
Toronto	,,	179.0
Vancouver	,,	196.7
Winnipeg	,,	177.9
Chile : Santiago	Pesos	29.17
Colombia : Bogotá	Pesos	1.98
Denmark : Copenhagen	Kr.	6.00 [3]
Estonia : 2 towns :	Est. Cr.	3.45
Tallinn	,,	3.62
Tartu	,,	3.31
United States :		
New York	Cents	229.3
Chicago	,,	207.7
8 towns :	,,	213.3
Baltimore	,,	221.3
Boston	,,	211.0
Denver	,,	196.8
Los Angeles	,,	212.8
New Orleans	,,	214.7
Philadelphia	,,	216.1
St. Louis	,,	207.3
San Francisco	,,	228.3
Finland : Helsinki	F. Mk.	56.08 [2]
France :		
Paris	Fr.	55.72
5 towns :	,,	51.11
Bordeaux	,,	49.69
Lille	,,	56.56
Lyons	,,	50.06
Marseilles	,,	50.93
Nancy	,,	48.32
Great Britain :		
London	Pence	83.3
6 towns [2]	,,	85.5
Greece : Athens	Drach.	145.59 [2]
Hungary : Budapest	Pengö	6.90
Ireland : 3 towns :	Pence	93.5
Cork	,,	92.6
Dublin	,,	98.7
Dundalk	,,	89.3
Italy :		
Rome	Lire	37.82 [2]
5 towns :	,,	34.40 [2]
Florence	,,	33.11 [2]
Genoa	,,	35.07 [2]
Milan	,,	35.53 [2]
Trieste	,,	33.07 [2]
Turin	,,	35.17 [2]
Latvia : Riga	Lat.	4.77
Luxemburg :		
Luxemburg	Fr.	39.78
Norway : Oslo	Kr.	7.17 [2]
New Zealand : Wellington	Pence	88.0
Palestine : 3 towns [4]	Mils	331.7 [2]
Netherlands : 4 towns :	Fl.	2.96
Amsterdam	,,	2.91
The Hague	,,	3.12
Rotterdam	,,	3.09
Utrecht	,,	2.83
Poland :		
Warsaw	Zloty	5.97
3 towns :	,,	5.79 [2]
Katowitz	,,	5.83 [2]
Lodz	,,	6.05 [2]
Poznan	,,	5.52
Rumania : 4 towns :	Lei	132.95
Bucharest	,,	148.81
Cernauti	,,	128.95
Chisinau	,,	122.56
Timisoara	,,	131.48
Sweden : 3 towns :	Kr.	7.40
Göteborg	,,	7.55
Malmö	,,	7.25
Stockholm	,,	7.40
Switzerland : 4 towns :	Fr.	8.26
Basle	,,	8.17
Berne	,,	8.15
Geneva	,,	8.45
Zurich	,,	8.27
Czecho-Slovakia :		
Prague	Kč.	46.17
2 towns :	,,	41.34
Bratislava	,,	41.24
Brno	,,	41.45
Newfoundland : St. John's	Cents	206.5
Union of South Africa :		
2 towns :	Pence	100.5
Cape Town	,,	101.3
Johannesburg	,,	99.2
Yugoslavia : 3 towns :	Dinar	61.78
Belgrade	,,	64.06
Ljubljana	,,	60.84
Zagreb	,,	60.43

[1] Except for Estonia (July 1938) ; Colombia, France (5 towns), Ireland, and the Netherlands (1 town) (November 1938) ; and Luxemburg (December 1938).

[2] Cost calculated by using an estimate for one or two minor articles.

[3] Birmingham, Bristol, Glasgow, Leeds, Manchester, and Newcastle.

[4] Haifa, Jerusalem, and Tel-Aviv ; Jewish market prices.

that this measure is fairly representative for foodstuffs in general, the prices of which tend to bear a certain fixed relation to each other; though even here important reservations must be made. But it is impossible to extend this measure directly to the aggregate of other goods and services of everyday use, as the purchasing power of the various national currencies is not necessarily the same over articles of clothing, heating and lighting, rent, and miscellaneous expenses as it is over foodstuffs. If these other articles could be included in the " basket of provisions ", so as to make it more representative of total consumption, the relations between these complete indicators of the cost of living would be different from those based exclusively on the prices of foodstuffs, and in some cases the difference might be appreciable.

In the second place, these figures, even considered strictly as an indication of purchasing power over foodstuffs, are at best only a very rough measuring rod. The quality of these articles may not be the same in all cases, so that the cost of the basket of provisions may be more or less affected by the fact that the articles selected are of a relatively higher or lower quality. This may in part explain certain differences in the cost of the basket of provisions between towns in the same country, to which too much importance should not be attached; in the averages computed for the country as a whole they would have a tendency to cancel one another out.

Lastly, as the quantity or " weight " attached to each article is the same for all towns, the basket is not equally representative of current consumption habits; certain articles which are little consumed in a given country—and may therefore be rather dear—may in fact have relatively too much importance in the basket of provisions, while others in more current use may be under-represented or absent; in either case the result will be to exaggerate the total cost of the basket as compared with the cost in towns where the composition of the basket is a more accurate reflection of consumption habits.

The figures in table A for the different towns cannot therefore be used indiscriminately as a measure of purchasing power in general. Even with their signification restricted to foodstuffs, their reliability varies according to the countries or towns between which comparisons are being made. The greater the differences in the systems of prices and standards of living of the working classes, the less reliable will the comparisons be.

It should be added that the " basket of provisions " in question is merely a theoretical concept: it should in no circumstances be used as even a rough measure of either the minimum or the normal expenditure of a working-class family. If to some extent its *composition* (the relative importance assigned to each item) is based on the average consumption habits of the principal countries considered, its *volume* is purely arbitrary, since the number of articles included has been determined largely by the possibility of collecting prices regularly in the countries considered. The absolute amount of the cost of the basket of provisions in any particular town has therefore no intrinsic meaning; it is significant only in its relation to the similar costs computed for other towns or countries.

The method of using the figures in table A to determine approximately the purchasing power (over food) of wages is as follows. Each wage figure is divided directly by the cost of the basket for the corresponding town, both figures being expressed in the national currency. The quotient gives the number of times the wage in question can pur-

chase the basket of provisions at the prices prevailing in the corresponding town. It may be noted that the absolute value of these figures is meaningless; as the volume of the basket of provisions is arbitrary, the number of baskets that a given wage can buy is necessarily so also. It is the relation between these numbers—merely coefficients of the purchasing power of wages over foodstuffs—which is important. For convenience of comparison, and also to prevent false interpretations, it is thus convenient to express these coefficients in terms of one of them (the coefficient for one town or country); dividing each coefficient by the one chosen as base gives an index number of the purchasing power of wages in terms of food.

Table B

Table B below gives the coefficients for the conversion into four different currency units of the national currencies of the various countries covered by the enquiry, at the average rate of exchange in 1938. This method allows of a choice between one or another of these units for the purpose of converting the wage data for various countries into a common currency, so as to obtain a rough measurement of the cost of labour, considered as an element in the cost of production. The conversion is effected by multiplying the data in the national currency by the corresponding coefficient.

These data have been communicated by the Secretariat of the League of Nations.

TABLE B. COEFFICIENTS FOR THE APPROXIMATE CONVERSION OF THE CURRENCIES OF THE COUNTRIES COVERED BY THE ENQUIRY, AT THE AVERAGE RATE OF EXCHANGE IN 1938

Country	Currency unit	Coefficients of conversion into:			
		Swiss francs	French francs	£ sterling	United States $
Germany	RM.	1.8	13.9	0.08	0.4
Argentina	Peso (n/c)	1.4	11.3	0.067	0.3
Australia	Austr. £	17.0	135.2	0.8	3.9
Belgium	Fr.	0.15	1.2	0.007	0.034
Bulgaria	Leva	0.053	0.42	0.0025	0.012
Canada [1]	$	4.4	34.5	0.2	0.99
Chile	Peso	0.18	1.4	0.008	0.04
Colombia	Peso	2.4	19.4	0.11	0.6
Denmark	Kr.	0.95	7.6	0.045	0.22
Estonia	E. Kr.	1.2	9.4	0.056	0.27
United States	$	4.4	35.0	0.2	1.00
Finland	F. Mk.	0.094	0.75	0.0044	0.022
France	Fr.	0.13	1	0.0059	0.029
Great Britain	£	21.4	170.6	1.00	4.9
Greece	Drachma	0.039	0.31	0.0018	0.009
Hungary	Pengö	1.3	10.2	0.06	0.3
Ireland	£	21.4	170.6	1.00	4.9
Italy	Lira	0.23	1.8	0.011	0.05
Latvia	Lat	0.85	6.7	0.04	0.19
Luxemburg	Fr.	0.19	1.5	0.0086	0.042
Norway	Kr.	1.1	8.5	0.05	0.25
New Zealand	N.Z. £	17.1	136.2	0.8	3.9
Palestine	Pal. £	21.4	170.6	1.00	4.9
Netherlands	Fl.	2.4	19.2	0.11	0.55
Poland	Zloty	0.8	6.6	0.039	0.19
Rumania	Lei	0.032	0.25	0.0015	0.007
Sweden	Kr.	1.1	8.7	0.05	0.25
Switzerland	Fr.	1.00	8.00	0.047	0.23
Czecho-Slovakia	Kč.	0.15	1.2	0.007	0.035
Union of South Africa	S. Afr. £	21.2	168.1	1.00	4.8
Yugoslavia	Dinar	0.1	0.8	0.0047	0.023

[1] Including Newfoundland.

Retail Prices in Certain Countries in October 1938

The results of the enquiry carried out by the International Labour Office into retail prices in different countries in 1938, in continuation of previous enquiries,[1] are given in the following table of the retail prices of certain foodstuffs and articles of heating in October 1938 (or some neighbouring date) in 32 countries.

In principle, the countries and towns covered by the enquiry are the same as those of the annual enquiry carried out by the International Labour Office on wages and normal hours of work in 30 specified occupations.[2] Information is also given for five additional countries—Bulgaria, Germany, Greece, Finland, and Czecho-Slovakia. For these the appropriate wage figures are not available; it has, however, been possible to obtain data relating to prices.

Most of these data have been communicated to the Office by the competent national or municipal statistical services, except in the cases of Australia, Germany and Italy; for these countries they have been taken by the Office from official publications. The articles whose prices are recorded are not always of exactly the same quality in different countries and even in different towns of the same country.

For wood and coal, the original prices quoted in some countries for the unit of volume have been converted by the Office into figures for the unit of weight (kilogram); for this purpose certain scales of equivalents (indicated in the notes) have been used.

In all cases an unweighted arithmetic average has been calculated by the Office for prices in the various towns in the same country with under (or only slightly over) a million inhabitants; these averages seem likely to be representative of the level of prices in all towns of average importance. Separate figures are, however, given for large towns or capitals with over a million inhabitants, the conditions in which are hardly comparable with those found in countries where such large centres of population do not exist.

The results of a special enquiry undertaken in 1937 and relating to rents in some of the corresponding towns have been published separately.[3]

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[1] For the results of the last enquiry, cf. *International Labour Review*, Vol. XXXVII, No. 3, March 1938, pp. 396-401: "Retail Prices in Certain Towns in 1937.

[2] Cf. in the present number of the *Review*: "Wages and Normal Hours of Work of Adult Males in Certain Occupations in Various Countries in October 1938", pp. 384 *et seq.*

[3] Cf. *International Labour Review*, Vol. XXXVIII, No. 6, Dec. 1938: "Rents of Workers' Dwellings in Various Towns, 1936-37".

AVERAGE RETAIL PRICES OF CERTAIN ARTICLES OF ORDINARY CONSUMPTION (FOOD AND HEATING) IN DIFFERENT TOWNS IN OCTOBER 1938

Articles	Unit	Germany[1]			Argentina	Australia	Belgium	Bulgaria	Canada
		Berlin	Vienna	5 Towns	Buenos Aires	2 Towns	Brussels	2 Towns	6 Towns
		RM.	RM.	RM.	Pesos (m/c)	Pence	Frs.	Leva	Cents
1. Wheaten bread	Kg.	0.67	1.11	0.71	0.32	5.4	2.10	5.00	15.4
2. Rye or " black " bread	,,	0.33	0.42	0.33	*	*	*	*	*
3. Flour (wheaten)	,,	0.46	0.45	0.44	0.19	3.7	2.49	4.10	8.1
4. Oatmeal or rolled oats	,,	0.55	0.80	0.57	0.97	7.2	*	*	11.8
5. Rice	,,	0.51	0.43	0.49	0.46	6.9	2.88	15.00	17.6
6. Macaroni	,,	0.98 [2]	*	0.78 [4]	0.33	11.8	7.49	*	*
7. Beef : 1st quality	,,	*	*	*	*	24.3	28.50	19.00	47.8
7. Beef : 2nd quality	,,	1.70	1.60	1.64	0.40	*	12.55	*	32.6
8. Pork : 1st quality	,,	*	*	*	*	28.5	25.18	27.50	54.7
8. Pork : 2nd quality	,,	1.60	1.73	1.62	0.85	*	*	*	49.2
9. Mutton : 1st quality	,,	*	*	*	*	17.9	*	25.00	51.0
9. Mutton : 2nd quality	,,	1.84	*	1.79	0.36	*	*	*	*
10. Veal : 1st quality	,,	*	*	*	*	*	*	25.00	32.7
10. Veal : 2nd quality	,,	2.02	1.87	2.08	0.60	*	*	*	*
11. Bacon	,,	2.12	2.00	2.14	0.75	39.8	17.00	38.00	74.6
12. Smoked fish (by weight)	,,	*	*	*	0.35	*	*	*	*
13. Margarine	,,	1.96 [2]	0.80 [3]	1.68 [4]	0.50	*	10.00	*	*
14. Lard	,,	2.08 [2]	1.73 [3]	2.14 [4]	0.85	*	13.21	41.00	31.8
15. Olive oil	,,	*	*	*	1.09 [5] [6]	86.4	17.23 [6]	77.78 [6]	*
16. Milk (unskimmed)	Litre	0.24	0.30	0.23	0.15	6.2	1.76	6.00	9.9
17. Single cream	,,	*	*	*	*	*	*	*	*
18. Butter : fresh	Kg.	3.13	3.14	3.12	1.60	42.5	26.51	63.00	58.9
18. Butter : salt	,,	*	*	*	*	*	*	*	*
19. Cheese (ordinary quality)	,,	1.19 [2]	2.40 [3]	2.00 [4]	0.89	30.2	15.59	26.00	53.2
20. Eggs (fresh)	1	0.12	0.10	0.12	0.05	1.3	0.87	2.00	3.1
21. Peas (dried)	Kg.	0.67	0.53	0.68	*	*	3.48	*	*
22. White or red haricot beans	,,	0.54	0.40	0.52	0.46	*	2.93	11.00	11.5
23. Potatoes	,,	0.08	0.09	0.08	0.14	4.3	0.62	5.25	2.7
24. Green or red cabbage	,,	0.15 [2]	*	0.12 [4]	*	*	*	*	*
25. Apples (home produce)	,,	0.76 [2]	*	*	*	*	*	10.00	*
26. Prunes (dried)	,,	1.22 [2]	*	*	*	30.9	*	19.00	23.4
27. Jam (ordinary quality)	,,	0.64 [2]	*	*	2.33	12.5	*	*	*
28. Sugar (white granulated)	,,	0.74	0.84	0.76	0.42	8.8	3.25	22.90	13.4
29. Chocolate (ordinary quality)	,,	*	*	*	1.20	*	11.85	*	*
30. Coffee	,,	4.71 [2]	5.60 [3]	4.74 [4]	1.14	70.5	19.60	145.00	77.8
31. Chicory	,,	*	*	*	1.50	*	4.30	*	*
32. Tea	,,	*	13.05 [3]	*	5.00	58.8	42.92	260.00	127.7
33. Cocoa	,,	1.88 [2]	3.30 [3]	*	0.90	56.2	20.54	*	81.7
34. Salt (cooking)	,,	0.28 [2]	0.51 [3]	0.26 [4]	0.09	2.2	0.70	4.00	5.5
35. Beer (ordinary quality)	Litre	0.70	0.66	0.72	0.50	*	1.20	20.00	*
36. Wine (ordinary quality)	,,	*	1.32 [3]	*	0.36	*	*	11.50	*
37. Firewood (fir)	100 kg.	*	5.00 [3]	*	4.50	58.2	5.00	72.50	76.7 [7]
38. Bituminous coal (household)	,,	3.26	6.00 [3]	3.17	4.50	66.1	37.60	63.25	106.6

[1] Data taken (unless otherwise stated : see notes [2], [3] and [4] from *Wirtschaft und Statistik*, No. 21, Nov. 1938, published by the " Statistisches Reichsamt ". [2] Da a taken from the *Berliner Wirtschaftsberichte*, No. 20, Oct. 1938. [3] Data taken from the *Statistische Nachrichten*, Vienna, No. 10/11, Nov. 1938. [4] Data relating to the town of Hamburg only, taken from *Aus Hamburgs Verwaltung und Wirtschaft*, No. 10, 1938. [5] Price of oil produced in the country ; price of imported olive oil : m$n 2.18. [6] Calculated on the basis of prices per litre, at the rate of 0.900 kg. for one litre. [7] Calculated on the basis of prices per m³, at the rate of 400 kg. per m³.

AVERAGE RETAIL PRICES OF CERTAIN ARTICLES OF ORDINARY CONSUMPTION (FOOD AND HEATING) IN DIFFERENT TOWNS IN OCTOBER 1938 (*cont.*)

Article	Unit	Chile	Colombia	Denmark	Estonia [4]	United States			Finland
		Santiago	Bogotà [2]	Copenhagen	2 Towns	New York	Chicago	8 Towns	Helsinki
		Peso	$	Kr.	C. est.	Cents	Cents	Cents	F. Mk.
1. Wheaten bread	Kg.	2.10	0.24	0.93	0.58	19.4	16.5	18.1	10.83
2. Rye or "black" bread	,,	2.40	0.12	0.22	0.20	21.2	20.1	21.2	4.06
3. Flour (wheaten)	,,	1.94	0.26	0.35	0.38	9.0	7.9	8.6	5.00
4. Oatmeal or rolled oats	,,	*	*	0.64	0.35	15.7	15.0	16.1	4.25
5. Rice	,,	3.38	0.22	0.80	0.65	17.4	16.5	17.6	5.97
6. Macaroni	,,	2.46	0.52	*	0.90	35.3	26.0	32.0	*
7. Beef : 1st quality	,,	7.92	0.60	2.43	0.85	71.4	66.6	63.9	13.10
7. Beef : 2nd quality	,,	6.06	0.48	1.45	0.60	54.7	55.1	48.4	*
8. Pork : 1st quality	,,	9.60	0.50	1.85	1.04	75.0	74.3	73.6	15.75
8. Pork : 2nd quality	,,	*	0.40	*	0.88	61.3	58.6	60.9	*
9. Mutton : 1st quality	,,	7.86	0.70	*	0.77	60.2	62.6	60.3	13.25
9. Mutton : 2nd quality	,,	6.72	0.60	*	0.68	43.7	53.4	43.7	*
10. Veal : 1st quality	,,	8.24	0.50	*	0.66	109.3	98.5	93.8	17.00
10. Veal : 2nd quality	,,	*	0.40	1.48	0.53	*	*	*	10.29
11. Bacon	,,	11.00	0.52	2.78	1.13	84.4	91.7	81.6	*
12. Smoked fish (by weight)	,,	*	0.80	*	0.08	*	*	*	*
13. Margarine	,,	*	*	1.34	0.95	39.5	39.7	40.1	15.00
14. Lard	,,	8.80	1.52	2.15	1.42	30.2	27.8	29.4	14.50
15. Olive oil	,,	16.50 [1]	1.50	*	*	*	*	*	*
16. Milk (unskimmed)	Litre	1.50	0.09	0.35	0.11	14.7	12.7	13.1	1.87
17. Single cream	,,	*	*	1.80	1.10	63.4	67.6	56.6	21.00
18. Butter : fresh	Kg.	18.57	1.00	*	1.70	75.8	70.3	75.0	30.70
18. Butter : salt	,,	16.50	*	3.10	*	*	*	*	*
19. Cheese (ordinary quality)	,,	11.40	0.70	2.00	1.50	63.7	58.0	57.0	23.00
20. Eggs (fresh)	1	0.42	0.03	0.13	0.05	4.3	3.3	3.5	1.18
21. Peas (dried)	Kg.	*	0.14	*	0.35	21.6	17.9	17.3	5.50
22. White or red haricot beans	,,	2.20	0.34	*	0.33	19.8	13.0	13.8	*
23. Potatoes	,,	0.44	0.14	0.15	0.07	4.4	4.0	4.5	1.19
24. Green or red cabbage	,,	*	*	0.11	0.30	7.5	5.5	5.8	1.58
25. Apples (home produce)	,,	*	*	0.68	*	13.2	14.1	10.7	*
26. Prunes (dried)	,,	3.00	*	0.86	*	20.9	22.7	19.3	7.50
27. Jam (ordinary quality)	,,	*	*	*	*	48.1	50.5	46.6	*
28. Sugar (white granulated)	,,	2.04	0.18	0.52	0.46	10.8	11.7	11.3	5.74
29. Chocolate (ordinary quality)	,,	12.00	0.58	3.49	*	74.1	74.1	71.8	*
30. Coffee	,,	10.17	0.28	4.79	4.00	52.0	51.0	53.0	20.00
31. Chicory	,,	*	*	2.00	0.28	*	*	*	*
32. Tea	,,	28.39	4.80	8.91	7.50	154.3	178.1	170.3	*
33. Cocoa	,,	11.50	0.68	*	2.88	39.2	37.9	37.4	*
34. Salt (cooking)	,,	0.36	0.10	0.17	0.05	8.6	10.1	9.1	0.80
35. Beer (ordinary quality)	Litre	1.20	0.13	*	*	*	*	*	4.13
36. Wine (ordinary quality)	,,	1.60	*	*	*	*	*	*	*
37. Firewood (fir)	100 kg.	25.00	1.44	11.00	1.42 [5]	*	*	*	21.46 [5]
38. Bituminous coal (household)	,,	80.00	1.20	4.15 [3]	*	82.3 [6]	104.3 [7]	115.3 [8]	*

[1] Calculated on the basis of prices per litre, at the rate of 0.900 kg. for one litre. [2] Data for November 1938. [3] Calculated on the basis of prices per hectolitre, at the rate of 75 kg. per hectolitre. [4] Data for July 1938. [5] Calculated on the basis of prices per m³, at the rate of 400 kg. per m³. [6] Price of bituminous coal ; price of anthracite : 113.4 cents. These prices inclusive a tax of 2 per cent. on sales. [7] Price of bituminous coal ; price of anthracite : 161.5 cents. These prices include a tax of 3 per cent. on sales. [8] Price of bituminous coal relating to 7 towns and including generally a tax of from 2 to 3 per cent. on sales, the percentage varying according to the town.

AVERAGE RETAIL PRICES OF CERTAIN ARTICLES OF ORDINARY CONSUMPTION (FOOD AND HEATING) IN DIFFERENT TOWNS IN OCTOBER 1938 (*cont.*)

Articles	Unit	France		Great Britain		Greece	Hungary	Ireland [2]	Italy [4]	
		Paris	5 Towns [3]	London	6 Towns	Athens [2]	Budapest	3 Towns	Rome	5 Towns
		Frs.	Frs.	Pence	Pence	Drachma	Pengö	Pence	Lire	Lire
1. Wheaten bread	Kg.	3.00	3.08	4.4	4.6	7.66	0.42	5.7	2.20	2.02
2. Rye or " black " bread	,,	*	*	*	*	6.41	0.36	*	*	*
3. Flour (wheaten)	,,	4.25	4.31 [3]	5.2	4.2	9.77	0.39	5.1	2.00	2.05
4. Oatmeal or rolled oats	,,	*	*	6.8	6.0	*	2.10	6.6	*	*
5. Rice	,,	5.35	4.19	6.0	5.5	12.43	0.90	9.2	2.00	2.03
6. Macaroni	,,	9.45	8.86	11.0	11.5	13.08	1.20	16.9	2.45	3.21
7. Beef : 1st quality	,,	31.35	24.19	32.4	30.4	30.86	2.50	31.6	12.00	9.05 [3]
7. Beef : 2nd quality	,,	12.65	10.11	13.4	15.7		2.35	18.4		
8. Pork : 1st quality	,,	21.35	20.50	31.7	31.7	46.88	1.91	28.7	*	12.79
8. Pork : 2nd quality	,,	16.50	20.02	25.8	24.3		1.58	*	*	
9. Mutton : 1st quality	,,	27.65	20.18	31.7	33.5	37.50	1.80	31.6	*	*
9. Mutton : 2nd quality	,,	9.75	11.73	13.7	15.2		1.34	18.4	*	*
10. Veal : 1st quality	,,	30.85	19.69	24.7	25.4	34.38	2.50	*	13.50	13.58 [3]
10. Veal : 2nd quality	,,	15.50	14.60	15.2	15.4		1.60	*		
11. Bacon	,,	17.20	13.56	31.1	35.1	*	2.10	36.0	10.00	9.59
12. Smoked fish (by weight)	,,	*	*	*	*	*	*	27.9	5.00	3.49 [3]
13. Margarine	,,	13.60	12.12	14.1	13.4	*	2.60	19.1	*	*
14. Lard	,,	14.55	12.20	17.2	16.1	*	1.95	20.6	9.00	8.69
15. Olive oil	,,	8.55 [1]	6.57 [1]	*	*	31.17	2.80	*	8.89	8.45
16. Milk (unskimmed)	Litre	2.00	1.92	6.2	6.2	9.38	0.30	5.0	1.55	1.24
17. Single cream	,,	*	*	*	*	*	1.90	40.5	*	*
18. Butter : fresh	Kg.	31.10	27.78	33.7	37.7	*	3.00	37.5	16.50	15.54
18. Butter : salt	,,	*	*	32.8	34.2	105.21	*	*	*	*
19. Cheese (ordinary quality)	,,	22.15	20.70	21.2	24.3	32.81	2.30	35.3	14.50	14.68
20. Eggs (fresh)	1	1.25	0.91	1.8	2.1	2.12	0.10	2.5	0.55	0.58
21. Peas (dried)	Kg.	5.30	4.90	7.3	5.3	*	0.48	8.5	*	*
22. White or red haricot beans	,,	6.55	5.49	5.7	5.5	15.66	0.44	8.8	2.85	2.68
23. Potatoes	,,	0.80	0.76	2.0	1.7	4.83	0.09	1.5	0.65	0.59
24. Green or red cabbage	,,	*	*	*	*	*	0.11	*	*	*
25. Apples (home produce)	,,	*	*	*	*	*	0.52	*	*	*
26. Prunes (dried)	,,	10.75	*	14.3	14.1	*	1.50	19.1	*	*
27. Jam (ordinary quality)	,,	*	*	14.7	14.2	*	2.08	24.6	*	*
28. Sugar (white granulated)	,,	4.85	5.47	5.3	5.5	13.94	1.28	7.0	6.55	6.99
29. Chocolate (ordinary quality)	,,	15.40	13.98	*	*	*	2.90	*	*	*
30. Coffee	,,	23.15	21.26	55.1	59.1	87.11	8.40	72.0	31.00	30.80
31. Chicory	,,	7.80	8.67	*	*	*	1.76	*	*	*
32. Tea	,,	58.00	*	57.8	61.3	*	18.00	83.4	*	*
33. Cocoa	,,	14.90	*	24.7	22.9	*	3.00	48.5	*	*
34. Salt (cooking)	,,	2.35	*	2.2	2.2	4.69	0.40	5.9	*	*
35. Beer (ordinary quality)	Litre	1.55	2.33	*	*	*	0.80	13.5	*	*
36. Wine (ordinary quality)	,,	3.15	2.89	*	*	*	0.66	*	*	*
37. Firewood (fir)	100 kg.	*	*	*	*	125.00	6.00	*	16.00	19.30
38. Bituminous coal (household)	,,	58.50	36.80	61.0	51.2	414.00	4.50	65.6	50.00	58.00

[1] Price of peanut oil. [2] Data for November 1938. [3] Averages calculated for a smaller number of towns than indicated in the heading. [4] Data taken from the *Bollettino dei Prezzi*, Rome, No. 12, Dec. 1938.

AVERAGE RETAIL PRICES OF CERTAIN ARTICLES OF ORDINARY CONSUMPTION (FOOD AND HEATING) IN DIFFERENT TOWNS IN OCTOBER 1938 (*cont.*)

Articles	Unit	Latvia	Luxemburg [2]	Norway	New Zealand	Palestine	Netherlands	Poland	
		Riga	Luxemburg	Oslo	Wellington	3 Towns	4 Towns	Warsaw	3 Towns
		Lats	Frs.	Kr.	Pence	Mils	Florins	Zlotys	Zlotys
1. Wheaten bread	Kg.	0.54	2.90	0.90	6.1	19.5	0.21	0.75	0.63
2. Rye or "black" bread	"	0.20	2.60	0.44	*	*	0.19	0.30	0.31
3. Flour (wheaten)	"	0.53	3.20	0.39	4.4	16.0	0.21	0.47	0.45
4. Oatmeal or rolled oats	"	0.57	7.25	0.65	7.3	*	0.20	*	*
5. Rice	"	1.06	3.17	0.80	6.6	19.2	0.18	0.81	0.83
6. Macaroni	"	1.21	5.98	1.40	13.8	*	0.47	1.40	1.40
7. Beef: 1st quality	"	1.01	13.50	2.78	22.0	122.0	1.15	1.55	1.47
7. Beef: 2nd quality	"		8.00	2.06	17.1	*	0.91		
8. Pork: 1st quality	"	1.33	15.50	2.80	23.1	*	1.15	1.52	1.53
8. Pork: 2nd quality	"		13.42	2.37	*	*	0.67		
9. Mutton: 1st quality	"	0.82	17.25	2.10	20.4	*	0.91	1.69	1.60 [7]
9. Mutton: 2nd quality	"		9.00	1.70	16.0	*	0.69		
10. Veal: 1st quality	"	0.97	17.50	3.00	*	*	1.31	2.12	1.63
10. Veal: 2nd quality	"		14.00	1.74	*	*	0.62 [7]		
11. Bacon	"	1.65	11.33	*	40.2	*	0.80	1.59	1.73
12. Smoked fish (by weight)	"	*	*	1.13	30.9	*	1.53 [7]	3.20	3.20
13. Margarine	"	*	8.00	1.81	*	*	1.10	3.00	3.00
14. Lard	"	1.87	10.00	*	*	*	0.87	2.00	2.00
15. Olive oil	"	4.50	15.28 [4]	*	*	41.6 [6]	0.95 [4, 6]	5.00	5.00
16. Milk (unskimmed)	Litre	0.20	1.63	0.33	5.7	19.7	0.13	0.28	0.26
17. Single cream	"	1.13 [1]	14.20	1.82	*	*	1.33	1.63	*
18. Butter: fresh	Kg.	2.63	22.25	3.73	35.8	191.4	1.44	3.26	3.41
salt	"	2.38	*	*	*	*	*	3.20	*
19. Cheese (ordinary quality)	"	1.91	21.88	2.33	23.7	92.9	0.71	0.91	0.83
20. Eggs (fresh)	1	0.12	1.00	0.14 [5]	1.5	3.4	0.06	0.11 [5]	0.11
21. Peas (dried)	Kg.	0.52	3.15	0.58	*	*	0.19	0.36	0.37
22. White or red haricot beans	"	0.53	2.58	0.62	*	31.2	0.29	0.45	0.45
23. Potatoes	"	0.08	0.54	0.12	2.1	8.6	0.05	0.10	0.08
24. Green or red cabbage	"	0.16	*	0.17	6.2	14.3	0.06	*	*
25. Apples (home produce)	"	0.45	3.00	*	5.5	38.5	0.30	1.00	1.00
26. Prunes (dried)	"	2.38	6.50	1.28	10.5	*	0.36	2.00	2.00
27. Jam (ordinary quality)	"	*	3.50	*	22.6	*	0.50	5.00	5.00
28. Sugar (white granulated)	"	0.67	2.38	0.64	7.7	16.1	0.45	1.00	1.00
29. Chocolate (ordinary quality)	"	3.00	9.75	2.71	*	*	*	6.00	6.00
30. Coffee	"	5.40	21.92	2.63	63.4	108.2	1.48	8.00	6.42
31. Chicory	"	1.12	*	*	*	*	*	1.00	1.00
32. Tea	"	15.79	53.00	10.53	67.2	288.5	2.40	20.00	20.81
33. Cocoa	"	3.59	12.60	2.70	72.8	*	1.21	6.00	6.00
34. Salt (cooking)	"	0.11	0.45	0.14	2.2	6.4	0.10	0.32	0.32
35. Beer (ordinary quality)	Litre	0.84	2.33	1.17	*	*	*	0.90	0.90
36. Wine (ordinary quality)	"	*	3.50	*	*	*	*	3.50	3.50
37. Firewood (fir)	100 kg.	1.65 [3]	25.17	4.21 [3]	74.5 [3]	*	6.00 [9]	7.00	6.80 [7]
38. Bituminous coal (household)	"	3.75	30.58	4.17	82.7	*	2.58 [10]	4.80	4.00

[1] Calculated on the basis of prices per kg., at the rate of 0.719 kg. for one litre. [2] Calculated on the basis of prices per m³, at the rate of 400 kg. per m³. [3] Data for 1 December, 1938. [4] Calculated on the basis of prices per litre, at the rate of 0.900 kg. for one litre. [5] Calculated on the basis of prices per kg., at the rate of 17.5 eggs per kg. [6] Price of vegetable oil. [7] Averages calculated for a smaller number of towns than indicated in the heading. [8] For two towns, price of table oil. [9] Price at The Hague only. [10] Calculated on the basis of prices per hectolitre, at the rate of 75 kg. per hectolitre.

AVERAGE RETAIL PRICES OF CERTAIN ARTICLES OF ORDINARY CONSUMPTION (FOOD AND HEATING) IN DIFFERENT TOWNS IN OCTOBER 1938 (*concluded*)

Articles	Unit	Rumania	Sweden	Switzerland	Newfoundland	Czecho-Slovakia		Union of South Africa	Yugoslavia
		4 Towns	3 Towns	4 Towns	St. John's	Prague	2 Towns	2 Towns	3 Towns
		Lei	Kr.	Fr.	Cents	Kč.	Kč.	Pence	Dinar
1. Wheaten bread	Kg.	7.63	0.84	0.46	14.1	*	*	7.8	4.00
2. Rye or "black" bread	,,	6.00	0.70	0.38	*	2.60	2.35	*	3.80
3. Flour (wheaten)	,,	9.00	0.42	0.51	6.9	2.85	2.78	6.9	3.58
4. Oatmeal or rolled oats	,,	5.00 [1]	0.54	0.50	15.4	11.30	12.00 [1]	10.9	8.50 [1]
5. Rice	,,	26.00	0.47	0.57	15.4	3.15	3.00	5.8	11.50 [1]
6. Macaroni	,,	19.50	0.70	0.69	33.1	9.90	7.93	18.0	*
7. Beef: 1st quality	,,	24.75	2.16	3.19	63.2	17.00	14.50	29.0	13.67
7. Beef: 2nd quality	,,	20.50	1.58	2.89	49.6	14.00	10.75	18.1	10.33
8. Pork: 1st quality	,,	36.50	2.42	3.50	65.0	17.00	13.00	24.9	17.67
8. Pork: 2nd quality	,,	33.00	*	*	*	14.00	11.50	20.0	15.33
9. Mutton: 1st quality	,,	19.50	2.52	4.10	66.1	12.00	10.00	24.0	14.00
9. Mutton: 2nd quality	,,	18.33 [1]	*	*	48.5			18.0	11.67
10. Veal: 1st quality	,,	34.00	2.62	4.19	55.1	13.00	11.50	*	19.00
10. Veal: 2nd quality	,,	22.50	1.55 [1]	3.47 [1]	*			*	15.67
11. Bacon	,,	37.00	2.43	3.88	92.6	16.00	16.00	43.1	17.17
12. Smoked fish (by weight)	,,	73.33 [1]	1.33	*	13.2	*	*	*	22.33
13. Margarine	,,	33.00 [1]	1.60	*	44.1	13.20	12.60	*	25.00 [1]
14. Lard	,,	42.00	1.38	2.13	44.1	14.58	14.75	26.2	18.33
15. Olive oil	,,	108.33 [2]	2.50 [2]	1.50 [2,6]	*	22.00	23.50	54.6 [2]	20.86 [2]
16. Milk (unskimmed)	Litre	6.13	0.25	0.34	14.1	1.60	1.55	5.5	2.29
17. Single cream	,,	31.28 [2]	1.45	*	*	7.50	6.00	*	10.79 [2]
18. Butter: fresh	Kg.	93.25	*	4.73	*	23.00	20.00	42.7	30.28
18. Butter: salt	,,	68.33 [1]	3.04	*	86.0	*	*	42.7	*
19. Cheese (ordinary quality)	,,	42.38	1.92	2.91	57.3	18.00	14.00	37.0	5.50
20. Eggs (fresh)	1	2.43	0.14	0.17	4.5	0.80	0.75	1.3	1.02
21. Peas (dried)	Kg.	15.75	0.42	0.56	13.2	3.75	3.35	10.6	5.43
22. White or red haricot beans	,,	14.33	0.75 [1]	0.43	13.2	3.20	2.55	8.4	4.37
23. Potatoes	,,	2.85	0.13	0.17	3.7	1.00	0.83	3.2	1.13
24. Green or red cabbage	,,	2.19	0.20	0.33	*	1.50	1.00	*	2.17
25. Apples (home produce)	,,	14.38	1.15	0.45	*	4.50	4.25	*	6.00
26. Prunes (dried)	,,	17.50	0.85	0.98	15.4	4.50	4.90	21.4	8.67
27. Jam (ordinary quality)	,,	35.75	1.37	*	*	6.00	6.25	12.0	15.33
28. Sugar (white granulated)	,,	32.00	0.40	0.46	13.2	6.13	6.23	7.5	14.50
29. Chocolate (ordinary quality)	,,	132.50	3.25	2.46	*	13.00	15.50	*	36.00
30. Coffee	,,	171.25	2.84	3.00	110.2	42.00	40.00	34.1	91.00
31. Chicory	,,	63.00	*	*	*	6.20	7.00	*	23.50
32. Tea	,,	341.25	8.50	8.30	136.7	90.00	100.00	56.2	210.83
33. Cocoa	,,	122.50	1.98	2.25 [1]	81.6	24.00	24.25	58.3	40.00
34. Salt (cooking)	,,	4.25	0.15	*	6.6	2.60	1.90	2.8	3.75
35. Beer (ordinary quality)	Litre	14.00	0.69	*	*	2.70	2.90	10.6	8.83
36. Wine (ordinary quality)	,,	18.00	2.85	*	*	10.00	10.50	47.5	9.33
37. Firewood (fir)	100 kg.	92.00	3.04 [4]	6.50 [1,4]	*	45.00	27.50	53.1	34.58 [4]
38. Bituminous coal (household)	,,	600.00	3.28 [5]	9.93	121.1	24.95	29.38	46.1	47.08

[1] Averages calculated for a smaller number of towns than indicated in the heading. [2] Calculated on the basis of prices per litre, at the rate of 0.900 kg. for one litre. [3] Calculated on the basis of prices per kg., at the rate of 0.719 kg. for one litre. [4] Calculated on the basis of prices per m³, at the rate of 400 kg. per m³. [5] Calculated on the basis of prices per hectolitre, at the rate of 75 kg. per hectolitre. [6] Price of peanut oil.

BIBLIOGRAPHY

Book Notes

INTERNATIONAL PUBLICATIONS

International Labour Office. *Economical Administration of Health Insurance Benefits.* Studies and Reports, Series M. (Social Insurance), No. 15. Geneva ; London, P. S. King, 1938. Distributed in the United States by the International Labour Office (Washington Branch). VII + 332 pp. 7s. ; $1.75.

The purpose of this study is to place at the disposal of national administrative services, sickness insurance institutions, and medical associations, a body of information that will help them to carry on their work of promoting the most scientific and, at the same time, economical organisation of the benefits in kind granted by sickness insurance funds. A short preface gives an outline of the progress made in the recognition and application of the principle of economy to the medical and pharmaceutical benefits of sickness insurance funds since the creation of compulsory sickness insurance schemes, and an account of the circumstances which led the International Labour Office to publish this preliminary general study of the problem. The work is in three parts. The first was prepared by Dr. Walter PRYLL, who was for many years chief medical adviser to a large insurance fund and a large national union of insurance funds, and who, through his experience there and his subsequent work in the International Labour Office, has acquired both the practical knowledge and the international information necessary for such a task. It deals with the nature of the principle of economy and its application to social insurance schemes, the work of insurance practitioners, diagnosis, therapeutics, and preventive measures. The second part, which consists of a collection of information, analyses the laws, regulations, and principles, concerning economical treatment and prescribing in force in Czecho-Slovakia, France, Germany, Great Britain, Hungary, Poland, and Yugoslavia. The third part is international in character ; it gives an account of the work of the Committee of Experts convened by the International Labour Office in 1934, the conclusions adopted by the Committee, and the attitude of the International Medical Association and the International Conference on Social Insurance and Mutual Aid on the subject of economical treatment and prescribing.

—— *Labour Courts. An International Survey of Judicial Systems for the Settlement of Disputes.* Studies and Reports, Series A (Industrial Relations), No. 40. Geneva ; London, P. S. King, 1938. Distributed in the United States by the International Labour Office (Washington Branch). VIII + 220 pp. 5s. ; $1.25.

This report is intended as a complement to the survey on *Conciliation and Arbitration in Industrial Disputes* published by the International Labour Office in 1933 (cf. *International Labour Review*, Vol. XXVII, No. 5, May 1933, page 724), the first part of which dealt with general problems of conciliation and arbitration, while the second contained monographs on the conciliation and arbitration machinery in use in the various countries for the settlement of " collective disputes about interests ", or disagreements as to what the conditions of work should be. Another type of conflicts, usually referred to as " disputes about rights " or justiciable disputes, falls within the competence of labour courts, in countries where a special labour judiciary is to be found. In many countries there is a close connection

between the functions of the labour courts and those of conciliation and arbitration procedure. The fact that the texts of laws have not always clearly differentiated between disputes about rights and disputes about interests is one of the reasons set out in the preface to the present report for dealing in separate studies with the bodies entrusted with the settlement of these two categories of disputes so as to bring out their main characteristics.

The first part of the report gives a comparative analysis of the judicial labour systems in existence, with the object of drawing attention to points of similarity or differences in the constitution and working of the various labour judiciaries. The second part contains a series of national monographs arranged in alphabetical order and describing the various phases of the development and operation of the special procedure in force in each country for the judicial settlement of labour disputes. It may be added that the *International Survey of Legal Decisions on Labour Law*, published annually by the International Labour Office since 1925, contains a note on the competent authorities having jurisdiction in labour matters in certain States, and brief notes on the labour judiciary of various States also appear from time to time in *Industrial and Labour Information* and in the International Labour Office *Year-Book*, but a much more complete and detailed account will be found in this survey.

—— *Social Problems in Agriculture. Record of the Permanent Agricultural Committee of the I.L.O. (7-15 February 1938).* Studies and Reports, Series K (Agriculture), No. 14. Geneva ; London, P. S. King, 1938. Distributed in the United States by the International Labour Office (Washington Branch). 4s. ; $1.

An introduction to this volume describes the origin, creation, and composition, of the Permanent Agricultural Committee, and its First Session, held in Geneva 7-15 February 1938. In accordance with the practice of the International Labour Office, the information needed by the Committee for its discussions was prepared by the Office, which drafted reports bearing on law and practice in the various countries with reference to the special items placed on the agenda, and also giving an analysis of these conditions from an international point of view. For the general discussion a note was submitted surveying the activity of the International Labour Conference up to the present with regard to agricultural labour questions, as well as the national development of agricultural labour legislation. Moreover, at the request of the Office, members of the Committee had prepared reports on the problems of agricultural labour in their respective countries. Finally, the Office had drawn up a brief summary of all the documents prepared for the Committee, which therefore disposed of a very considerable amount of information for its guidance.

The present volume contains, in addition to the introduction, the international parts of the reports prepared by the Office, as well as a full but condensed summary of the debates, showing their course and bringing out all the points of view expressed, and finally the Report, with appendices, adopted by the Committee itself and addressed to the Governing Body of the International Labour Office.

Association internationale pour la protection de l'enfance. *Internationaler Kinderschutz Kongress, Frankfurt (Main), 12.-18. Juni 1938.*

Contains the reports prepared for submission to the thirteenth International Congress on Child Welfare by representatives of sixteen countries. These reports deal with the following subjects : (1) financial policy, fiscal legislation, and social insurance, considered in relation to the child ; (2) protection of crippled children through detection and treatment ; (3) the circumstances in which legislative measures or public institutions should make up for the lack of parental care ; (4) social and educational advantages of placing town children in the country.

Centre agraire international. (1) *Les problèmes agraires sur le plan international.* (2) *Pour l'organisation internationale de l'agriculture.* (3) *Autarchie et collaboration dans le monde agraire.* (4) *Etudes d'histoire paysanne (Espagne-Russie).* (5) *La guerre mondiale et les paysans.* Paris, Librairie de l'Institut national agronomique, 1938.

Collection of studies setting out the main lines of an agricultural policy aiming at prosperity under peace conditions. The first concerns agricultural problems considered on the international plane, and includes, in addition to an account of recent

reforms in France and in Belgium, proposals for a general programme of reforms in European agriculture. The second examines the fundamental conditions—in regard to markets, trade relations, financial questions, etc.—which are considered indispensable for a general movement of rural social reform, and emphasises the rôle of the International Labour Office and the League of Nations as the most suitable organisations to further the developments contemplated. Other studies are devoted to the position of peasants, particularly in Europe, in regard to the problem of peace or war. The absence of certain countries from the League of Nations and their tendency towards autarky constitute a danger—which should be avoided—that European agricultural economy may be divided into two antagonistic groups. The theses of the totalitarian countries regarding autarky, agricultural industries, and the social conception of land, have their counterpart in the policy of other countries based on defence of the interests of rural populations and agriculturists. The conclusion reached is that if autarky is engendered by a war policy the peasants can derive no benefit from it.

Institut international d'agriculture. *Actes de la quatorzième assemblée générale, 23-28 mai 1938.* Rome, 1938. xv + 563 pp.

The proceedings of the General Meeting of the International Institute of Agriculture, held in May 1938, contain, among other matter, a number of interesting reports on the instability of farmers' earnings and ways of stabilising them, the rôle of the cinema and broadcasting in technical and vocational training in agriculture and the information of consumers, the influence of industrial inventions on agriculture and the marketing of agricultural products, and hygiene in nutrition and agriculture.

—— *Bibliographie internationale d'économie rurale. International Bibliography of Agricultural Economics. Internationale Bibliographie der Agrarwirtschaft.* Vol. I. 1938-1939. Rome. x + 137 pp.

The International Institute of Agriculture has added a new series to its international bibliographies with the first number of an international bibliography of agricultural economics, which will appear at quarterly intervals. For several years the Institute's library has prepared bibliographies of agricultural economics which have appeared in the journal *Berichte über Landwirtschaft*. By the transfer to the International Institute it is intended to secure for the bibliography more rapid and more regular publication and a larger international circulation.

International Union of Food and Drink Workers. *Holidays with Pay in the Food and Drink Industries 1937-38.* Zurich, 45 pp. typescript.

This publication contains the results of an enquiry into the extent of holidays with pay in the food and drink industries undertaken by the International Secretariat in pursuance of a decision of the International Union of Food and Drink Workers at its Seventh Congress held in Paris in 1937. The enquiry covers approximately 585,000 workers of whom 302,261 are members of unions affiliated to the International Union, the remainder being members of non-affiliated Unions in Australia, the United States of America and the Union of Soviet Socialist Republics for whom data were obtainable.

Zentralstelle für freiwilligen Arbeitsdienst. International Student Service. *Arbeitsdienst in 13 Staaten. Probleme-Lösungen. Berichte und Vorträge der II. Internationalen Arbeitsdiensttagung in Seeligberg (Kt. Uri) Schweiz, vom 5.-10. September 1937.* Zurich, Orell Füssli. 236 pp.

The effects of the economic depression in recent years have led a large number of countries to organise compulsory or voluntary labour services, which, in addition to their alleged civic value, provide occupation for unemployed young people. In order to compare the experience of different countries in this connection, the International Student Service and the Swiss Central Institution for Voluntary Labour Service convoked an international Conference in September 1937. This volume, which contains the report of the Conference, includes monographs on the organisation of labour services in thirteen countries, and a summary of the discussions.

OFFICIAL PUBLICATIONS

CANADA

Department of Labour. *The Unemployment and Agricultural Assistance Act, 1937. Report of Dominion Commissioner of Unemployment Relief, 31 March 1938.* Ottawa, 1938. 40 pp.

This report was analysed in *Industrial and Labour Information*, Vol. LXVII, No. 6, 8 August 1938, pages 167-170.

Department of Trade and Commerce. Dominion Bureau of Statistics. *Urban Earnings and Housing Accommodation in Canada, 1931 and 1936.* Ottawa, 1938. 38 pp. 25 cents.

CZECHO-SLOVAKIA

Ministry of Social Welfare. Social Institute. *Twenty Years of Social Welfare in the Czecho-Slovak Republic.* Publication No. 74. Prague, 1938. 103 pp., illustr., maps, diagrams, tables.

While this survey, which was intended to mark the occasion of the twentieth anniversary of the Czecho-Slovak Republic, was in preparation, political events altered the frontiers of the country, entailing a loss of approximately 29 per cent. of its territory and 31 per cent. of its population, with far-reaching effects on its economic and social structure. The statistical data included in the work are therefore in some respects out of date. The Ministry of Social Welfare nevertheless decided to publish this volume in order to give an idea of the social policy pursued and the considerable social progress achieved in Czecho-Slovakia during the years 1918 to 1938. The survey covers the whole field of social welfare and gives an account of the development of social legislation and the results of its application, based on official reports. Important chapters are devoted to labour protection, employment, unemployment relief, emigration, social insurance, the welfare of young persons, housing, co-operation, and relations with the International Labour Organisation. The activities of factory inspectors are described, and an account is given of the legislation relating to hours of work, the employment of women and children, night work, and wages. The many branches of industry employing home workers have been of considerable economic importance to the country; data are given regarding the number of enterprises and workers employed, and the statutory provisions regulating home work are described. Other subjects dealt with in this part of the book are works committees and the statutory provisions relating to industrial hygiene and safety. The chapters relating to employment and unemployment give an account of the organisation of employment exchanges in different parts of the country (Bohemia, Moravia-Silesia, Slovakia, and Carpathian Ruthenia), and figures relating to the number of applicants and vacancies filled. The legislation relating to the protection of the labour market and to unemployment relief, and the measures adopted for the assistance of the unemployed during the economic depression, are fully described. One of the initial difficulties with which Czecho-Slovakia was faced was the emigration problem. The manner in which it was dealt with, the relevant legislation enacted, and the volume of emigration during the years reviewed, are the subject of another chapter. Considerable space is devoted to social insurance, compulsory in all its branches except unemployment insurance, which is based on the "Ghent system". Sickness insurance, which was introduced in 1888, covers workers and salaried employees in every occupation as well as their families, and there is a scheme of health insurance for civil servants. Over half the population of the country is covered by the sickness insurance scheme, which affords excellent medical service and pharmaceutical benefits. Other branches of social insurance cover the following risks: invalidity, old age, and death, and industrial accidents and diseases. There are pension insurance schemes for salaried employees and non-manual workers, and for miners. A full description is given of all these schemes, and the competence of the Central Insurance Institution and the General Pension Institution is explained. The importance of social insurance for the health, working capacity, and economic conditions, of the people is emphasised. The chapter devoted to housing describes at some length the measures taken to increase building activity and for the protection of tenants. The volume is well illustrated and includes numerous maps, diagrams, and statistical tables.

FINLAND

Maaseudun Asuntokomitea. *Mietintö.* No. 1. Helsinki, 1937. IV + 76 pp., illustr.

Report of the Committee on housing in rural areas.

FRANCE

Administration générale de l'assistance publique à Paris. *Compte moral et administratif de l'exercice 1936.* Paris, 1938. VIII + 122 pp., tables.

Conseil municipal de Paris. *Rapport au nom de la sixième Commission sur la question des îlots insalubres.* Présenté par Louis SELLIER, conseiller municipal. 1937. 477 pp., map.

This study shows the extent to which improvement in public health in Paris and a revival of the building industry, which is an indispensable factor in general economic activity, depend on the pulling down of blocks of insanitary houses. It points out that the serious difficulties which hamper the execution of slum-clearance schemes arise from the cost of building and the high rate of interest on loans, and that neither the State, the municipal authorities, nor private enterprise, can alone solve the problem, though it can be done by their combined efforts. The problem consists in pulling down 4,500 houses and rehousing 200,000 persons. The cost of expropriations is estimated at 1,500,000,000 francs, that of street conditioning at 500,000,000, and that of rebuilding at 5,200,000,000, the total expenditure involved amounting to 7,200,000,000 francs. With an interest rate of 8 per cent. and State aid, the work could be carried out by private enterprise, provided 190,000,000 francs were contributed by the State and the same amount by the Paris municipal authorities annually for 40 years. The report describes the extent and the spread of disease due to insanitary housing. Health and demographic statistics illustrate this survey. The fifth chapter reviews the different methods of expropriation enjoined by the laws of European countries and those of the United States, as well as the methods adopted in those countries for financing the slum-clearance campaign.

Conseil national économique. *Les problèmes du crédit.* III. *Le crédit à la construction et au bâtiment.* Conclusions adoptées par le Conseil national économique dans sa session du 11 juillet 1938, et rapport présenté par M. DE MONSÉGOU, auditeur au Conseil d'Etat. Melun, 1938.

After showing that the depression in the building industry in France is attributable mainly to the rise in the cost of building, arising out of the high prices of materials and increased labour costs, and to the fall in the profits of the industry, the report submitted to the French National Economic Council examines in turn : (1) the procedure followed in raising loans for building purposes (nature, conditions, and value, of mortgages), this study being followed by an evaluation of French mortgage debts ; (2) credit agencies (for long-term and short-term loans) ; (3) long-term and short-term operations ; (4) measures taken in France during recent years with a view to adjusting resources to requirements. This part of the report includes a survey of building loans in Great Britain, Switzerland, and Belgium. The conclusions reached by the National Economic Council at a session held on 11 July 1938 are appended.

GREAT BRITAIN

Commission on the Marketing of West African Cocoa. *Report.* London, H.M. Stationery Office, 1938. VI + 221 pp., map. 3s. 6d.

The Commission was appointed by the British Secretary of State for the Colonies in February 1938 to examine the marketing of cocoa in the Gold Coast and Nigeria, with special reference to a dispute which had arisen between certain European buying firms and the African farmers. The report includes a full account of the introduction of a buying agreement in October 1937 by a group of European firms and of the prolonged hold-up of cocoa by Gold Coast farmers which ensued. The Commission concludes that a satisfactory solution of the problems thus disclosed is to be found in the association of the producers in some form of organisation which would undertake the collective marketing of the cocoa crop. A number of

recommendations are made regarding the extension of the operations of co-operative societies. Among the reports submitted to the Commission was a note on labour prepared by a Gold Coast Government officer. From this note it is clear that the African cocoa industry now employs a large number of immigrant Africans, and that these Africans had great difficulty in securing remuneration for their labour during the cocoa hold-up. The Commission considers it necessary to afford protection to agricultural labourers employed by Africans at least as much as to labour employed in European undertakings. It recommends that the Chief Inspector of Labour in the Gold Coast should give special consideration to problems of agricultural labour, which should also be examined in Nigeria.

Department of Scientific and Industrial Research. *Methods for the Detection of Toxic Gases in Industry.* Leaflet No. 1. *Hydrogen Sulphide.* London, H.M. Stationery Office, 1937. IV + 6 pp. 3s. 6d.

After indicating the different industries in which hydrogen sulphide is encountered, and its poisonous effects, this pamphlet deals with methods of detection and describes in detail the lead acetate test, a chemical method involving colour changes, which has been adopted as the standard test.

—— *Methods for the Detection of Toxic Gases in Industry.* Leaflet No. 2. *Hydrogen Cyanide Vapour.* London, H.M. Stationery Office, 1938. IV + 9 pp., diagrams. 5s. 6d.

This study follows the same plan as the above study on hydrogen sulphide. After indicating the risks of poisoning by hydrogen cyanide vapour in certain industrial processes and describing the poisonous effects of this gas, it deals mainly with methods of detection, the conditions of use of the standard tests, and first aid. The methods of detection described include the use of colorimetric indications which are reproduced in colour charts.

Home Office. Departmental Committee on Lighting in Factories. *Fourth Report.* London, H.M. Stationery Office, 1938. 54 pp. 1s.

Report of the Committee set up in 1937 to review, in the light of existing knowledge, the recommendations made in 1915, 1921, and 1922, by the former Departmental Committee on Lighting in Factories and Workshops. After a historical survey of investigations made in this field in Great Britain and of earlier studies by the Departmental Committee, the report examines the present industrial conditions and the legal provisions in force relating to industrial lighting. A review of the principles of vision and illumination and an explanation of technical terms (illumination, surface brightness, glare, etc.) is followed by a detailed account of the causes and effects of defective lighting and the essentials of good lighting, in particular artificial lighting. The recommendations made concern adequate illumination (in respect of working areas, processes requiring discrimination of detail, and interior passages and access), suppression of glare, avoidance of extraneous shadow, etc. Finally, the Committee recommends that its proposals, as statutory regulations, shall take effect from 1 July 1939.

Medical Research Council. *Eighteenth Annual Report of the Industrial Health Research Board. To 30 June 1938.* London, H.M. Stationery Office, 1938. IV + 71 pp. 1s.

The first part of this report contains a summary of the activities of the Industrial Health Research Board during the last twenty years, and sets out the conclusions reached as the result of investigations in the following fields: hours of work; environmental conditions (lighting and vision, heating and ventilation, noise, vibration, dust and toxic vapours); methods of work (physiology and psychology of work); vocational suitability (vocational selection and guidance, accident proneness); industrial sickness (sickness absence and labour wastage, psychoneurosis in industry, statistical enquiries, specific industrial diseases: industrial pulmonary disease and poisoning by industrial solvents). The second part is devoted to a report on the work of the Board during the year ending 30 June 1938. The greater part of the work consisted in the study of environmental conditions. Other researches concerned the physiology and psychology of accidents and occupational sickness (digestive complaints of transport workers, industrial pulmonary diseases, etc.).

Ministry of Health. *A Study of the Trend of Mortality Rates in Urban Communities of England and Wales, with Special Reference to "Depressed Areas".* By E. LEWIS-FANING, Ph.D. Reports on Public Health and Medical Subjects, No. 86. London, H.M. Stationery Office, 1938. II + 66 pp. 1s.

This report was analysed in *Industrial and Labour Information*, Vol. LXIX, No. 2, 9 January 1939, pages 60-61.

INDIA

BOMBAY

Adult Education Committee. *Report 1938.* Bombay, Superintendent, Government Printing and Stationery; London, High Commissioner for India, 1938. IV + 86 pp. 3 annas or 4d.

Report of the Committee appointed by the Government of Bombay in January 1938 to advise Government on the question of adult education. The Committee recommend, among other things, the creation of a Central Adult Education Board of three members for organising and administering the adult education programme within the Province. The Board, it is considered, should work in close co-operation with the Educational Department and submit detailed proposals, on the basis of which Government should determine its policy.

Educational Department. *Report on Vocational Training in Primary and Secondary Schools and Consequent Reorganisation.* Bombay, Superintendent, Government Printing and Stationery; London, High Commissioner for India, 1938. VII + 125 pp. 4 annas or 5d.

Report of a Committee appointed by the Government of Bombay on 10 January 1938 to advise Government on the question of vocational training for boys and girls in primary and secondary schools in the Province of Bombay. The Committee recommend, among other things, a seven years' continuous and compulsory course for primary or basic education, including agriculture and subsidiary occupations in rural areas, and spinning and weaving and other crafts in both urban and rural areas. The primary education course should be supplemented by a secondary course of four years divided into two groups of general and scientific subjects. The Committee also recommend the appointment of an Advisory Board of Education to advise Government on matters of educational policy and practice, a Special Publication Bureau for the preparation of books for the use of teachers, etc., and a Special Officer to organise, in consultation with a small advisory committee, all work connected with the initiation and development of the scheme of basic education.

SWEDEN

Statistiska Centralbyran. Bureau central de statistique. *Ut- och invandring, ar 1937. Emigration et immigration en 1937.* Sveriges Officiella Statistik. Folkmängden och dess förändringar. Statistique officielle de la Suède. Etat et mouvement de la population. Stockholm, 1938. 35 pp., tables.

Report of the Swedish Central Statistical Office on emigration and immigration in 1937. The tables included show the distribution of migrants according to country, sex, age, occupation, etc.

UNITED STATES

Census of Partial Employment, Unemployment and Occupations, 1937. Final Reports on Total and Partial Unemployment. With data for counties and for cities of 10,000 or more. Washington, Govt. Printing Office, 1938.

Department of the Interior. National Park Service. *1937 Yearbook.* Washington, Govt. Printing Office, 1938. VII + 55 pp., tables, illustr. 25 cents.

An account of the achievements in 1937 of the States and the Federal Government in connection with parks and recreation. During the year reviewed, emergency funds expended on State, county and metropolitan park schemes supervised by the National Park Service amounted to $13,597,647, while $8,151,216 was spent on the development of recreational demonstration areas and related work. Laws relating to parks and recreation were enacted in a number of States, and a

United States Tourist Bureau was established as a division of the National Park Service. A chapter which presents special interest is devoted to the upkeep of State parks and the organisation of recreational activities. The work, which includes many illustrations, ends with an extensive bibliography of works on the subjects dealt with and on recreational activities in the different States.

Department of Labor. Bureau of Labor Statistics. *Strikes in the United States 1880-1936.* By Florence PETERSON. Bulletin No. 651. Washington, Govt. Printing Office, 1938. v + 183 pp. 20 cents.

Of the five chapters into which this statistical study is divided, the last, which covers the period from 1927 to 1936, is the most important and the most complete. The principal types of tables used in connection with the earlier periods are employed here. These include analyses of strikes by years, seasonal trend, number of workers, duration, labour organisations, major issues, results, important cities, States, and major causes in each industry. Helpful explanatory notes and charts accompany the tables. In addition, certain definitions and a detailed analysis of the method of compilation are given in the introduction and Appendixes II and III.

National Resources Committee. Division of Costs and Responsibility for Public Works. *A Report to the National Resources Committee.* Reprinted from *Public Works Planning* published 1 December 1936. Washington, Govt. Printing Office, 1938. iv + 193 pp., tables. 25 cents.

Works Progress Administration. *A Survey of Relief and Security Programs.* By Arthur E. BURNS and Edward A. WILLIAMS. Washington, 1938. 102 pp.

A review of the development of relief policies and programmes in the United States over approximately the last decade, showing the evolution towards a broad Federal public assistance programme including the Works Programme and the Social Security Programme, supplemented by the general relief programmes in the various States. In the authors' opinion, the present need is an integrated and perfected long-term programme of unemployment insurance, public works and public assistance. They urge planning in this direction with a clear recognition of the fact that unemployment has become a permanent problem and can no longer be met through emergency measures.

—— *Report on Progress of the W.P.A. Program, 30 June 1938.* Washington. ix + 147 pp., illustr.

This report presents detailed information on employment furnished through Works Progress Administration schemes, the types of schemes undertaken, the results achieved and the cost. It also includes a description of the National Youth Administration works programme and student aid schemes, and an analysis of funds appropriated under the Emergency Relief Appropriation Acts. Although the report deals primarily with the activities of the Works Progress Administration and the National Youth Administration, it also reviews the assistance provided through the various security programmes of the Federal State and local governments, indicating their inter-relation with the Works Progress Administration programme.

NEW YORK

Department of Labor. Division of Industrial Hygiene. *Silicosis in the Foundry Industry.* Special Bulletin No. 197, 1938. Albany, New York. 48 pp., map. 25 cents.

The aim of this study was to determine the incidence of silicosis in the foundries of New York State and the actual working conditions in order to detect the etiological factors of the disease in the foundry industry. The study covered 311 foundries employing 4,754 workers. The results of the enquiry lead to the conclusion that the silicosis risk in the foundry industry in New York State is of a mild degree of severity, and that it may be expected to yield to appropriate measures of control.

PENNSYLVANIA

Department of Labor and Industry. Occupational Disease Prevention Division. ***Survey of Carbon Disulphide and Hydrogen Sulphide Hazards in the Viscose Rayon Industry.*** Bulletin No. 46. Harrisburg, 1938. 69 pp., diagrams.

This study, which was made of men on their jobs (not men incapacitated or hospital patients), confirms the results of previous researches regarding the symptoms of poisoning by carbon disulphide, and brings to light new diagnostic signs which are described in detail (early nervous disturbances, ocular symptoms, loss of hearing, and blood disorders). The authors have also established a chemical method for discovering carbon disulphide in the urine, and draw attention to the increase of the cholesterin content of the blood as an early sign in carbon disulphide poisoning.

RHODE ISLAND

Department of Labor. Division of Women and Children. ***Survey of Hours, Wages and Other Conditions of Employment in the Laundry and Dry Cleansing Industries in the State of Rhode Island.*** 1938. 36 pp., tables. Typescript.

NON-OFFICIAL PUBLICATIONS

Antoniewski Dr. Stanislaw. ***Z ekonomiki gospodarstw duzych i malych.*** Biblioteka Pulawska. Seria prac spoleczno-gospodarczych Nr. 77. Warsaw, Panstw. Instyt. Naukow. Gosp. Wiejsk. w Pulawach, 1938. 123 pp.

Study on the management of large and small farms in Poland.

Association des anciens élèves de l'Ecole supérieure de la métallurgie et de l'industrie des mines de Nancy. Supplément au nº 57 du *Bulletin* de l'Association consacré à l'économie algérienne. Algiers, Fontana, 1938. 100 pp., illustr.

Short but substantial and concise monographs by engineers and specialists reviewing every branch of Algerian economy, especially industries and important public works. The social aspect of the questions dealt with is considered in many cases as well as the technical and economic aspects. A special article is devoted to the Native labour supply.

Baars, Dr. I. A. ***Openbare Werken en Conjunctuurbeweging. Public Works Planning and the Business Cycle.*** Nederlandsch Economisch Institut. Netherlands Economic Institute. Haarlem, Erven, F. Bohn, 1937. IX + 149 pp.

The object of this study is to examine, on the basis of the results of a number of enquiries, the possibility of initiating a policy of public works with a view to reducing economic fluctuations. The author's calculations lead him to the conclusion that, to be efficacious, such a policy presupposes a stable price level. To this end he advocates control of, and a tax on, investments ; the proceeds of the tax would be used to meet expenditure on public works in a boom period. In this way, the public debt, instead of increasing during that period, would decrease considerably, and, should an economic depression occur, public authorities would have at their disposal considerable funds with which to combat it.

Benoist, Marc. ***Paquebots, cargos et chalutiers.*** Préface de Jacques MARCHEGAY. Collection " La France vivante ". Paris, J. de Gigord. VIII + 182 pp., illustr.

Bergez, José Antonio. ***Hacia una Democracia Orgánica.*** Preface by Dr. J. A. GONZALEZ CALDERON. Buenos Aires, Bernabé y Cia., 1938. 233 pp.

Bready, J. Wesley. ***England : Before and After Wesley. The Evangelical Revival and Social Reform.*** London, Hodder and Stoughton, 1938. 463 pp., illustr. 10s. 6d.

Brüschweiler, Dr. Carl. ***Saläre und Arbeitsverhältnisse kaufmännischer Angestellter in der Schweiz, 1936.*** Zurich, Schweizerischer Kauffmännischer Verein, 1938. 124 pp.

—— *Les conditions de salaires et de travail du personnel commercial en Suisse, 1936.* Translated and adapted by Emile LOSEY. Zurich, Société suisse des commerçants, 1938. 15 pp.

Cioli, Lionello. *Histoire économique depuis l'antiquité jusqu'à nos jours.* Préface et traduction de Gaston BOUTHOUL. Bibliothèque politique et économique. Paris, Payot, 1938. 318 pp. 36 frs.

Confédération des syndicats chrétiens de Belgique. *Compte rendu de la manifestation jubilaire du 7 août 1938 et du treizième Congrès tenu 21-23 juillet 1938.* Brussels. 188 pp.

Congreso Obrero Católico Nacional. *Primer Congreso Obrero Católico Nacional reunido en Quito del 28 de Setiembre al 2 de Octubre 1938.* 82 pp.

Report of the first Catholic Workers' Congress held in Ecuador. The recommendations made relate to the creation of Christian trade unions, insurance funds against unemployment and sickness, and vocational and technical schools.

Crawford, Sir William, and Broadley, H. *The People's Food.* London, Toronto, William Heinemann, 1938. XIII + 336 pp.

This work offers a vivid picture of food consumption habits among urban families in Great Britain. The study is based on an enquiry into food consumption in roughly 5,000 households in 7 large cities during the winter of 1936-37. The families investigated were grouped according to both social class and income per head. Assuming that the figures on income and food expenditure for the different classes determined by the enquiry could be applied to all the members of those classes throughout the country, it would follow that almost 8 million individuals were in 1936-37 living in homes where expenditure on foodstuffs per head was below the minimum laid down by the British Medical Association. Moreover, analysis of the nutritional adequacy of the foods actually consumed leads to the result that much larger numbers, estimated at between 20 and 30 million individuals for the various nutrients, did not come up to the dietary standards established by the British Medical Association and other authorities. Apart from these general results, the study offers a wealth of information on a variety of subjects, such as the time of the day at which the various meals are taken in each social class, shopping habits, and the use of cookery books. The authors place great hopes in educational and advertising work as a means for improving the standard of nutrition in Great Britain.

Debatin, Frank M. *Administration of Adult Education.* With chapters on *Publicity* by Helen HURD, and an Introduction by Lyman BRYSON. New York, American Book Cy., 1938. XII + 488 pp. $3.

A handbook of pedagogical information designed for persons and organisations dealing with adult education in the United States. The first part contains a general analysis of the nature and objectives of adult education. The second defines the special fields of adult education and gives in this connection statistical data relating to the different groups of students. The third deals with the teaching and administrative staffs. The fourth is devoted to material problems such as equipment, publicity, and finance. The fifth deals with special problems, including the importance of libraries, the education of parents, workers' education, and the rôle of the Federal Government.

Delegationen zur Förderung der wirtschaftlichen Zusammenarbeit zwischen den Nordischen Ländern. *Die Nordische Länder in der Weltwirtschaft. Dänemark, Finnland, Island, Norwegen, Schweden.* Copenhagen, 1938. 261 pp., illustr., tables, map.

Délégations pour le développement de la coopération économique des Pays du Nord. *Les Pays du Nord dans l'économie mondiale. Danemark, Finlande, Islande, Norvège, Suède.* Copenhagen, 1938. 255 pp., illustr., tables, map.

German and French editions of the survey by the Delegations for the Promotion of Economic Co-operation between the Northern Countries analysed in the *International Labour Review*, Vol. XXXVIII, No. 5, November 1938, page 722.

Desmaras, Carlos R. *La Fiebre Ondulante como Enfermedad Profesional.* Reprinted from the *Revista Juridica Argentina.* La Ley, I, ii, p. 891. Buenos Aires, 1938. 32 pp.

The author, who is the Secretary of the Institute of Labour Law in the University of La Plata, has written an extremely lucid and systematic study of the various aspects of undulant fever, which in Argentina is treated as an occupational disease. After quoting the statutory provisions relating to the disease, he examines in particular the effects produced in various kinds of animals by the bacteria causing the disease, and the infection produced in man, diagnosis and the difficulties it presents, the ways in which the disease may be contracted by man, and the consequences and complications that may ensue, and ends with some remarks about prognosis and treatment.

Deutscher Genossenschaftsverband. *Jahrbuch des Deutschen Genossenschaftsverbandes für 1937.* XXXIX. Jahrgang (77. Folge des Jahresberichts). Berlin, 1938. 109 pp., tables.

Duffy, Luke J., and Keating, Michael J. *The Shops Acts, 1938. A Handbook for the use of those concerned in the administration of the Shops (Hours of Trading) Act, 1938, and the Shops (Conditions of Employment) Act, 1938. With Appendix containing the text of both Acts and regulations made thereunder.* Dublin, Labour Party, 1938. 236 pp. 2s.

After an introduction in which the differences between the new legislation and that previously existing are explained, a detailed analysis is made of the provisions of the Shop Acts, 1938 (which cover hours of trading, half-holidays, closing hours and hours of work, Sunday trading and employment, public holidays and annual holidays, employment of juveniles, wage-fixing machinery and health and hygiene).

Fabricant, Solomon. *Capital Consumption and Adjustment.* New York, National Bureau of Economic Research, 1938. xx + 271 pp.

Fauquet, Dr. Georges. *Agricultural Co-operation and the Agrarian Question in Catalonia.* Reprinted from the *Year-Book of Agricultural Co-operation, 1938.* Pp. 370-380. Frome, London, Butler and Tanner, 1938.

—— *Das landwirtschaftliche Genossenschaftswesen und die Agrarfrage in Katalonien.* Barcelona, Generalitat de Catalunya, Dirección General d'Agricultura, 1938. 13 pp.

—— *La coopération agricole et la question agraire en Catalogne.* Reprinted from the *Revue des études coopératives,* July-September 1938, No. 68. Paris, Les Presses universitaires de France, 1938. 10 pp.

Ferrière, A. *La structure économique de demain. L'ordre coopératif par le plan du travail. Etudes critiques.* Geneva, " Services publics ", 1936. 62 pp.

Deprecating both economic planning and economic liberalism, carried to extremes, the author suggests an economic organisation based largely on co-operative principles.

Hansen, Alvin Harvey. *Full Recovery or Stagnation?* London, Adam and Charles Black, 1938. 350 pp. 15s.

In this book Professor Hansen covers a wide range of topics, from theoretical analysis of the nature of trade cycles to the discussion against this background of practical policy relative to the problems of depression, recovery and stagnation. Emphasis is laid on the rôle of new investment in maintaining a high level of business activity, and Professor Hansen suggests that, in view of the failure of private investment to revive in sufficient volume, it may be necessary, if anything like full employment is to be secured, to have a great expansion in the volume of public investment.

Harvard University. *Vocational and Educational Guidance as a Professional Career.* Cambridge, Mass., 1937. 20 pp.

This pamphlet emphasises the importance of the work of a vocational and educational counsellor and presents a clear and considered view of the preparation which should be sought by a prospective counsellor, giving due consideration

to the study and experience desirable as a background for courses in vocational and educational guidance.

Heyman, Georges. *De middenstand in de Staathuishoudkunde.* Antwerp, De Sikkel, 1938. 294 pp.

The thesis advanced in this book is that all the economic difficulties with which the middle class is faced to-day are due to the prevailing economic organisation and policies followed during recent years. The difficulties arising out of the existing organisation are examined in detail, with special regard to trade organisations, monopolies, the currency and credit structure, and the reduced resistance of the economic system to business cycle fluctuations. The economic policies which have given rise to difficulties for the middle class have taken the form of excessive protectionism, currency manipulation, expensive social policy, and heavy taxation. To each of these different aspects of controlled (*onvrije*) organisation and policy, the author devotes a special chapter. He reaches the conclusion that a return to a system of free economy is the only way in which the middle class can develop its initiative and income, and thereby carry out once more its function of co-ordinating economic activity, thus restoring the economy of the country as a whole.

Hicks, Ursula K. *The Finance of British Government 1920-1936.* London, Humphrey Milford, Oxford University Press, 1938. XII + 391 pp. 15s.

Mrs. Hicks has written a careful and systematic study of British public finance since the war. The book is in three parts dealing respectively with expenditure, taxation and monetary policy and the debt. In the first part, chapters are devoted to social expenditure, State aid to industry, public investment, unemployment, etc.; in the second, there is a chapter on balancing the budget and on taxation and the trade cycle; the third includes a chapter on the general monetary setting of the post-war period in Great Britain. In a book dealing with such a wide field it is inevitable that some problems are examined in rather less detail than might have been hoped for, but Mrs. Hicks has brought together a great mass of material on a particularly important phase in the evolution of public financial methods in Great Britain, and has presented an analysis of the economic and social consequences of the policy pursued.

Hook, James W. *Industry's Obligation to the Unemployed.* New Haven, Connecticut, Tuttle, Morehouse and Taylor, 1938. 39 pp.

The author suggests voluntary action on the part of employers to fulfil industry's obligations to the unemployed, and presents a detailed plan for the protection of permanent employees during a period of business depression through an employment stabilisation programme, based on the experience of the employing unit, and through reserve funds from which unemployment benefit or dismissal wages, death, old-age benefits, etc., would be paid. Unemployables would be cared for by local poor relief and it is suggested that each community should establish a local public planning board which would be charged with planning in advance schemes to supply work for casual and nomadic workers on the necessary scale. Action by the Federal Government is considered undesirable, but, if found necessary, the author says, it should be directed towards forcing each unit of industry to set its house in order and to provide its own unemployment and other reserves, and towards leading a campaign against unbridled competition.

Horne, Dr. Bernardino C. (1) *El Aspecto Social en los Planes Agrarios.* Address given before the Sociedad Cientifica Argentina, 5 Nov. 1937. Reprinted from the *Anales de Colonización*, organ of the Camara Argentina de Colonización. Buenos Aires, 1938. 23 pp.

Indian Problems in Malaya. A Brief Survey in Relation to Emigration. Compiled by K. A. NEELAKANDHA AIYER. Kuala Lumpur, "The Indian" Office, 1938. VIII + 150 pp. Rs. 1.8 (India); $1.50 (Malaya).

After a brief survey of Indian emigration to Malaya and of the economic and political conditions of the country, the authors consider the future policy of Indian emigration, and advocate a bilateral agreement between India and Malaya of a comprehensive nature in consonance with present-day conditions and the dignity and status of modern India, as well as with the highest interest of the emigrants themselves.

Institution des assurances sociales. *Compte rendu de l'action de colonies de vacances et colonies curatives pour les enfants et jeunes travailleurs et travailleuses en Pologne dirigée par l'institution des assurances sociales ainsi que par les assurances sociales, 1936-1937.* Warsaw, 1938. 68 pp., illustr.

Jalowiecki, Andrzej. *Zagadnienie zatrudnienia i plac w polskim przemysle hutniczym.* Katowitz, 1938. 44 pp.

Brief analysis of the problem of employment and wages in Polish iron works. The author considers that only radical changes with a view to modernising this branch of industry will enable the costs of production to be lowered and the present rate of wages to be maintained. These changes should be accompanied by an increase in production, without which a fall in employment appears to be inevitable.

Joanitescu, Dimitrie. *Das Problem der modernen Sozialversicherung.* Inaugural-Dissertation zur Erlangung der Doktorwürde genehmigt von der Philosophischen Fakultät der Friedrich-Wilhelms Universität zu Berlin. Bucharest, 1937. x + 416 pp.

This thesis contains a general survey of the theoretical and practical problems connected with social insurance, and an interesting appraisal of the criticisms brought against it.

Kalnins, Vilis. *Die Entwicklung der Landwirtschaft Lettlands seit der Agrarreform.* Inaugural-Dissertation zur Erlangung der Staatswissenschaftlichen Doktorwürde genehmigt von der Rechts- und Staatswissenschaftlichen Fakultät der Friedrich-Wilhelms Universität zu Berlin. Berlin, Eugen Kehrer, 1937. 89 pp.

Keilhau, Dr. Wilhelm. *Volkswirtschaftspolitik und weltwirtschaftliche Stellung Norwegens.* Kieler Vorträge gehalten im Institut für Weltwirtschaft an der Universität Kiel. Herausgegeben von Dr. Andreas PREDÖHL, 54. Jena, Gustav Fischer, 1938.

Keir, Malcolm. *Labor Problems from Both Sides.* New York, The Ronald Press Co., 1938. 381 pp. $3.50.

This book, which is designed primarily for college students, presents the pros and cons of the principal American labour problems without drawing conclusions. The author discusses such broad questions as: "Can unemployment be abolished ?", " Should employers bear the cost of industrial accidents ? ", " Can hours of work be reduced ? ", etc., outlining affirmative and negative answers, and closing each chapter with a list of selected references. The text includes interesting controversial data. It is sometimes difficult, however, to get a comprehensive view of the interrelation of the various questions discussed.

Kropf, Robert. *Die schweizerische Zigarettenindustrie.* Dissertation der rechts- und staatswissenschaftlichen Fakultät der Universität Zürich zur Erlangung der Würde eines Doktors der Volkswirtschaft. Affoltern, J. Weiss, 1938. xv + 200 pp.

Ku przebudowie gospodarczej. Wytyczne inwestycyj panstwowych. Warsaw, Polska Gospodarcza, 1937. 79 pp., diagrams.

Labor Research Association. *Labor Fact Book.* Vol. IV. New York, International Publishers, 1938. 223 pp. $1.

The fourth issue of this handbook contains some entirely new material, including tables and computations by the Labor Research Association relating to labour and social conditions in the United States, in particular the real income of the working population during the years since 1929. A long chapter is devoted to trade union trends. Another, on labour in other countries, is included for the first time.

Landsorganisationen i Sverige. *Berättelse, 1937.* Stockholm, A. B. Arbetarnas Tryckeri, 1938. 592 + 75 pp.

Annual report for 1937 of the Swedish Confederation of Trade Unions. The report, which gives a detailed account of the activities of the Confederation, includes the texts of the various memoranda submitted to the authorities on questions of national and international social legislation. It shows the continued

rapid growth of the organisation, which, at the end of 1936, had a membership of 757,376 (112,103 women) and, at the end of 1937, 840,234 members (125,067 women), divided among 41 national unions and 7,045 local branches. The total assets of the affiliated national unions (not including the local branches) and the Confederation itself amounted to over 113 million kronor. The number of collective agreements in force at the end of 1937 was 11,688, covering 742,987 workers belonging to the Confederation.

Lohia, Rammanohar. *Indians in Foreign Lands.* Foreword by J. B. KRIPALANI. Congress Political and Economic Studies, No. 11. Allahabad, All-India Congress Committee, 1938. v + 37 pp.

This pamphlet describes briefly the social, political and economic handicaps from which Indian emigrants suffer in British oversea territories, and advises them to stand together and co-operate with other colonial peoples for the redressment of their grievances. India is also advised to give her support to oversea Indian communities.

Lopes, Helvecio Xavier. *Saluçoes Práticas de Direito da Trabalho.* Rio de Janeiro, Riedel, 1937. VIII + 172 pp.

Matsui, H. *Nihon Shigen Seisaku.* (Natural Resources Policy in Japan). Tokyo, 1938. 310 pp.

Mauldon, F. R. E., Anderson, D. L., and Marks, May W. *Mechanisation in Australian Industries.* Hobart, University of Tasmania, Department of Economics and Commerce, 1938. 78 pp., typescript.

This study, which forms part of an extended enquiry organised by the International Institute of Intellectual Co-operation, is concerned with the actual course of mechanisation in Australia since about 1920, and is limited to the measurement and appraisal of the technical and economic facts in so far as they have a bearing upon the supply of labour. One of the author's more general conclusions is that entrepreneurs tend to underestimate both the degree to which mechanisation causes the exclusion of labour and the degree to which it creates forces causing re-employment.

McDougall, F. L. *Food and Welfare.* League of Nations Studies of Nutrition and National Economic Policy. Geneva, Geneva Research Centre, 1938. 56 pp.

After a brief review of recent activities of the League of Nations in regard to nutrition, the author considers the bases of the problem, trends in food habits, the economics of food consumption, standards of living, and the agricultural problem. In the last chapter he discusses some results of policies of increased consumption and states his opinion that an improved level of nutrition, higher standards of living, a more prosperous world agriculture, freer international trade and an increased volume of trade, would ensure economic and political stability to the nations prepared to co-operate along these lines.

Millett, John D. *The Works Progress Administration in New York City.* Committee on Public Administration of the Social Science Research Council. Chicago, Public Administration Service, 1938. XI + 228 pp.

Müller, Josef. *Die biologische Lage des deutschen Bauerntums. Ein Beitrag zur Ergründung des Geburtenrückganges im Bauerntum.* 5. Beiheft zum Archiv für Bevölkerungswissenschaft und Bevölkerungs politik. Leipzig, S. Hirzel, 1938. 83 pp.

Museo Social Argentino. *Instituto de Orientación Profesional. Sus Fines y Su Organización.* Buenos Aires, 1938. 19 pp.

National Industrial Conference Board. *Plans for Rating Employees.* Studies in Personnel Policy, No. 8. New York, 1938. 39 pp. $2.

The purpose of this study is to present the general practice of American industry in regard to the rating of personnel, and to describe the procedure, objectives, and technique, as well as the difficulties that may be encountered. For this purpose the information received from 94 companies, employing 618,127 persons, and having plans for the periodic rating of employees, has been used. The practice of rating

is stated to have proved a definite aid to management in promoting fairness and better understanding, and particularly in adjusting grievances which arise when ability is considered as one factor in decisions relating to employment.

Norton, L. J. *Financing Agriculture.* Danville, The Interstate, 1938. 319 pp.

Oliveira Santos, Ruy de. *A condiçao juridica do estrangeiro no Brasil.* Rio de Janeiro, A. Coelho Branco, 1938. 262 pp.

Analysis of all the constitutional and legal provisions in Brazil relating to the immigration, settlement, activities, and deportation, of foreigners.

Public Administration Service. *Personnel Administration and Procedure as installed in the Indiana Department of Public Welfare and Unemployment Compensation Division.* Publication No. 61. Chicago, 1938. 90 pp. $1.50.

Ranga, N. G. *Kisan speaks.* Madras, Kisan Publications, 1937. IV + 381 pp.

Collection of lectures given by the author at the Andrha Peasants' Institute in Madras in 1937. The subjects dealt with include the peasant movement in India, agricultural indebtedness, forests and irrigation, crop planning, agricultural marketing, mass education, and village *panchayats* (councils). The author points out some of the problems involved and suggests remedial measures.

Rusudel, J. *Le contrat de travail et les délais de préavis au Maroc. Manuel pratique de la législation marocaine du travail à l'usage des patrons, employés et ouvriers.* Casablanca, Imprimerie française, 1938. 240 pp. 35 frs.

The author explains the principal provisions of Moroccan law relating to contracts of employment. In a clear and simple manner he deals with the problems relating to the drawing up of the contract, the obligations of the parties, including the payment of wages and holidays with pay, and the many questions to which termination of the contract gives rise. In an appendix, he gives some particulars of the system of collective agreements and agents' contracts of employment, and indicates the usual length of notice given in different occupations.

Sato Kanji, Dr. *Nihon Nogyo Tsuron* (Outline of Japanese Agriculture). Tokyo, Koyo Shoin, 1938. 516 pp.

Sauvy, Alfred. *Essai sur la conjoncture et la prévision économiques.* Paris, Centre polytechnicien d'études économiques, 1938. 190 pp.

Seldte, Franz. *Sozialpolitik im Dritten Reich.* Neue Beiträge 1937. Berlin, 1938. 124 pp., illustr.

The German Minister of Labour gives an account of the activities of his Department during 1937. In the first chapter he reviews the problems dealt with during the year. As the title of this chapter—" The Four-Year Plan and Social Policy " — indicates, the application of the four-year plan, begun in 1936, determined the main lines of social policy. Economic autarky demanded organised employment of available labour and measures to counteract the shortage of skilled workers, problems to which the German authorities devoted particular attention, and which took precedence of other questions, such as wages, conditions of women workers, and hours of work. Subsequent chapters are devoted to housing policy and land settlement, the working of the " social honour courts ", the relation between repopulation policy and sickness insurance, and the national institutions for medical assistance to disabled ex-service men. The last chapter contains information on the organisation and scope of the Ministry of Labour.

Simon, Pierre-Henri. *L'Eglise et la révolution sociale.* Paris, Editions du Cerf. 47 pp. 3.75 frs.

The author explains the theological basis of Catholic social doctrine, defines the position of the Church in regard to capitalism, communism, and totalitarianism, and outlines his conception of an occupational organisation designed to make the worker no longer a mere wage earner, but an associate.

Sinha, J. C. *Indian Currency Problems in the Last Decade (1926-1936).* Sir Kikabhai Premchand Readership Lectures delivered in February 1937 at Delhi

University. Delhi University Publications, No. 7, Delhi, 1938. VII + 166 pp., charts, tables.

In these lectures, the author discusses the main problems of Indian currency up to 1926, the periods of adjustment (1926-27), of comparative stability (1927-29), of strain, crisis and depression (1929-32), and of recovery (since 1933). The linking of the rupee to sterling and gold exports, and the objectives of the Reserve Bank are discussed, and some practical lines of reform for achieving financial stability are suggested.

Sobel, Louis H., and Samler, Joseph. *Group Methods in Vocational Guidance, with Specific Reference to the Economic Adjustment Problems of Jewish Youth.* New York, the Furrow Press, 1938. 111 pp.

This pamphlet attempts to provide information upon the occupational adjustment problems facing Jewish youth to-day, and suggestions for meeting these problems by organised group effort. It is designed primarily for the use of leaders of Jewish community life, such as club leaders, counsellors and teachers in Jewish centres, directors of Young Men's and Young Women's Hebrew Associations, administrators of Hebrew schools and camps, etc. The authors point out, however, that, although it is concerned principally with the occupational problems of Jewish youth its interest extends to a wider field since these problems are closely linked with the employment problems of youth as a whole, and that all efforts at occupational adjustment by the Jewish group must be co-ordinated with the efforts of the general community and public agencies.

Souza Netto, Francisco de Andrade. *Da Justiça do Trabalho da sua Organisaçao e Competencia.* Dissertação que apresenta ao concurso para cathedratico da cadeira de "Legislação Social", da Faculdade de Direito da Universidade de São Paulo. São Paulo, Livraria Academica, 1938. 155 pp.

Steinwarz, Herbert. *Speiseräume und Küchen in gewerblichen Betrieben.* Herausgegeben vom Amt "Schönheit der Arbeit". Berlin, Verlag der Deutschen Arbeitsfront, 1938. VII + 82 pp., illustr. 4.20 marks.

The equipment of canteens and kitchens plays an important part in the attempts of the "Schönheit der Arbeit" (Beauty of Work) Service of the German Labour Front to improve the workers' conditions of living in factories. The text and illustrations of this book contain valuable information as to the results achieved during the last few years throughout German industry.

Swanstrom, Edward E. *The Waterfront Labor Problem. A Study in Decasualization and Unemployment Insurance.* New York, Fordham University Press, 1938. x + 186 pp. $3.50.

A study of the serious social and economic consequences for longshoremen of the lack of effective organisation of the port labour market and the prevalent casual system of employment. The author reviews experience with schemes for decasualisation of longshore employment in London, Liverpool, Hamburg and Pacific Coast ports in the United States, and notes the present attitude of American employers and longshoremen towards decasualisation. He suggests the possible beneficial effect of unemployment insurance in regularising port employment, and, in conclusion, outlines a plan for the decasualisation of longshore labour in the port of New York.

Swiatkowski, Henryk, and Gadmoski, Antoni. *Ochrona pracy robotników rolnych.* I. *Wyklad systematyczny. La protection des ouvriers agricoles.* I. *Exposé systématique.* XVI + 216 pp. II. *Teksty ustaw i rozporzadzen.* II. *Lois et règlements.* VIII + 134 pp. Instytut spraw spoleczynch. Sprawy ustawodawstwa i ustroju pracy, Nr. 2. Institut des problèmes sociaux. Législation et systèmes du travail, No. 2. Warsaw, 1937.

In presenting this analysis of the principles governing the protection of agricultural workers in Poland, the authors' aim is to provide as full a documentation as possible for persons who are called upon to deal with problems concerning the legal regulation of employment in agriculture. The work is in two parts. The first analyses the statutory provisions, the leading principles in court decisions, and the results of long practical experience constituting a sort of common law. The second part includes the texts of the principal relevant laws and regulations.

Taylor, Albion G. *Labor Problems and Labor Law.* New York, Prentice-Hall, 1938. xiii + 663 pp. $5.

Many interesting aspects of social legislation are dealt with in this work. In spite of its numerous historical references to European developments, the book is primarily concerned with North American problems and solutions. It begins with a general description of the nature and origin of labour problems and goes on to show how American labour is organised and what are its primary objectives, as well as its social, educational and political programmes. The legality of trade organisations, the idea of freedom of contract in relation to individual and collective bargaining, the powers of the State to restrict the rights of the individual in the public interest, the distribution of legislative powers between the central and local authorities are all considered, together with other legal questions. Unemployment, social insurance, standards of living, minimum wages in relation to hours of work, child labour, women workers, immigration, and convict labour are dealt with at considerable length. In connection with the adjustment of industrial conflicts, a brief description is given of the purpose of the anti-trust laws and of the leading cases which have influenced their application. Special mention is made of the efficient way in which the Government has intervened in Australia, Canada, and New Zealand, for the settlement of labour disputes. This leads to an analysis of the provisions of the various Acts which have contributed to the establishment of the National Labor Relations Board in the United States. The last part of the book discusses the attitude and achievements of the employers' associations. The final chapter gives interesting data on personnel management and profit sharing; the author reaches the conclusion that "the vigorous growth of personnel management during the decade of the twenties and its ability to survive the testing depression of the thirties give evidence of the value which employers find in it to lessen productive costs". At the end of each part into which this comprehensive study of industrial problems and labour legislation is divided will be found a complete bibliography on the subjects treated therein. The volume should prove a useful addition to the library of every student of social science.

The Agricultural Labour Movement in Bihar. Edited by H. B. Chandra, B.Com., M.L.A. Foreword by Babu Jagat Narain Lal, M.A., LL.B., M.L.A. Patna, Bihar Provincial Khetmazdoor Sabha Bankipore, 1938. 96 pp., illustr. 4 annas.

This pamphlet describes the rise, in Bihar, of the *Khet-Mazdoor Sabha* (the Union of Field Labourers), their demonstration before the Legislative Assembly, and the demands formulated by the leaders for the redressment of their grievances.

The Legal Status of Aliens in Pacific Countries. An International Survey of Law and Practice concerning Immigration, Naturalization and Deportation of Aliens and Their Legal Rights and Disabilities. Edited by Norman MacKenzie. A Report in the International Research Series of the Institute of Pacific Relations, issued under the auspices of the Secretariat. London, New York, Toronto, Oxford University Press, 1937. xii + 374 pp.

A series of reports on the status and treatment of aliens in the following countries: Australia, Canada, China, Indo-China, the Pacific dependencies of Great Britain, Japan, the Netherlands Indies, New Zealand, the Philippine Islands, the U.S.S.R., and the United States. An interesting and suggestive introduction is contributed by the editor, who was at one time a member of the staff of the International Labour Office, in which he analyses the problem of the alien in its legal aspects, from the time when the alien leaves his own country to visit or reside in another country until he becomes a citizen of the new country or returns to his country of former residence. According to the general plan of the survey, the report for each country was to cover immigration and deportation laws and practices, and the legal status of resident aliens, and to include a discussion of any disabilities or restrictions with regard to political rights, property rights, employment, social protection, legal protection, etc., and, in some cases, of the general treatment of aliens, both from a legal and a sociological point of view. There is a certain lack of uniformity, however, as regards the topics considered in the reports. The volume is well documented and, as a whole, comprises a valuable and timely survey of the status of aliens in the countries of the Pacific area.

Thompson, S. Warren, and Whelpton, P. K. *The Population of Hamilton County, Ohio, in 1935.* Part I: *A Summary and Interpretation of the Regional Census of Hamilton County, Ohio.* x + 118 pp. Part II: *Selected Tables.* ix + 253 pp. The Regional Department of Economic Security. Research Bureau. Studies in Economic Security: I and II. Cincinnati, Ohio, The Cincinnati Employment Center, 1937.

Ulrici, H., Koch, O., and others. *Tuberkulose.* Ein Fortbildungskursus der Berliner Akademie für ärztliche Fortbildung im Tuberkulosekrankenhaus der Stadt Berlin "Waldhaus Charlottenburg". Berlin, Julius Springer, 1937. 147 pp., illustr.

Université de Paris. Institut de science de la presse. *Cahiers de la presse.* Paris, Recueil Sirey.

This well-produced quarterly review, the first volume of which appeared early in 1938, is designed to contribute to the development of the "science of the Press", described as a new branch of knowledge, a new method applied to the observation of social phenomena. The *Cahiers de la presse* contain, in addition to articles on the history, the theory, the technique, and the organisation, of the Press, news items (including law reports), factual articles (relating to statistics, legislation, insurance, education, etc.), and a bibliographical section containing full analytical and critical notices. Among the principal articles which have appeared in the first four numbers of this review the following may be cited—in No. 1: "Is there a Science of the Press?", by S. VALOT; "Journalism and Authors' Rights", by R. WEISS; "Concerning Press Agreements", by G. SCELLE; "The American Press during the Second Half of the Eighteenth Century", by Bernard FAY; in No. 2: "The Press, a Source of Information and Study in Poland", by S. JARKOWSKI; "Apprenticeship in Dramatic Criticism", by F. STROWSKI; "Scientific Information in the Press", by A. CHESNIER DU CHESNE; in No. 3: "The International Organisation of Journalists and the Freedom of the Press", by S. VALOT; "The Professional Ethics of Journalists", by R. SUDRE; "False News and Inaccurate News", by E. HAMBURGER; in No. 4: "The Intellectual Rôle of the Press", by A. M. CHAUCHAT; "The Selection and Study of Periodicals", by J. PORCHER. Each number also contains a series of articles on the organisation and the legal position of the Press in different countries.

Weil, Roland. *Le chômage de la jeunesse intellectuelle diplômée.* Paris, Recueil Sirey, 1937. xv + 333 pp.

After describing the position of unemployed professional workers, particularly in France, the author examines the measures adopted in different countries to remedy the situation. Frequent citations are made from publications of the International Labour Office and the resolutions adopted in connection with the problem by the International Labour Conference and the Professional Workers' Advisory Committee.

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